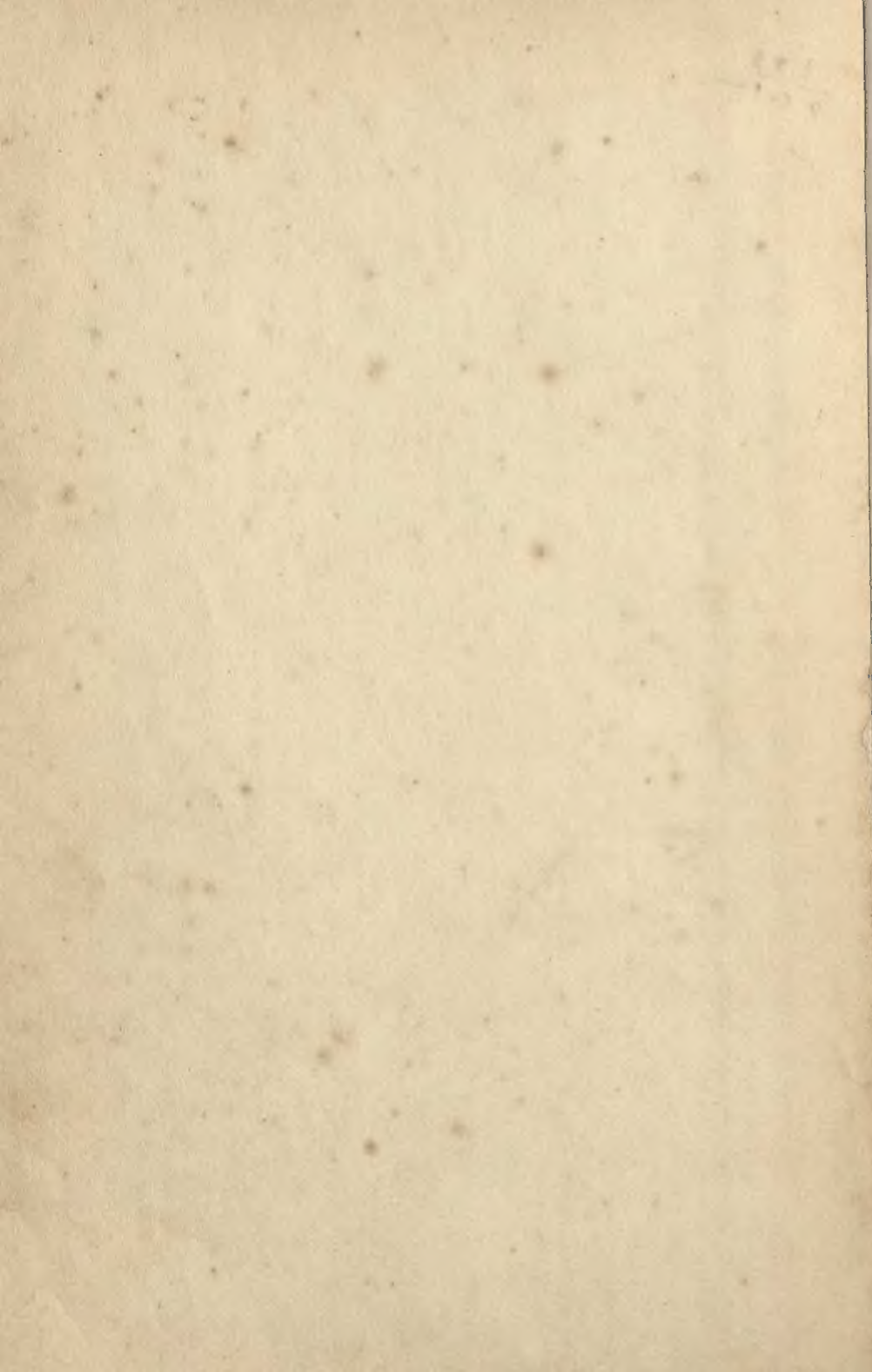


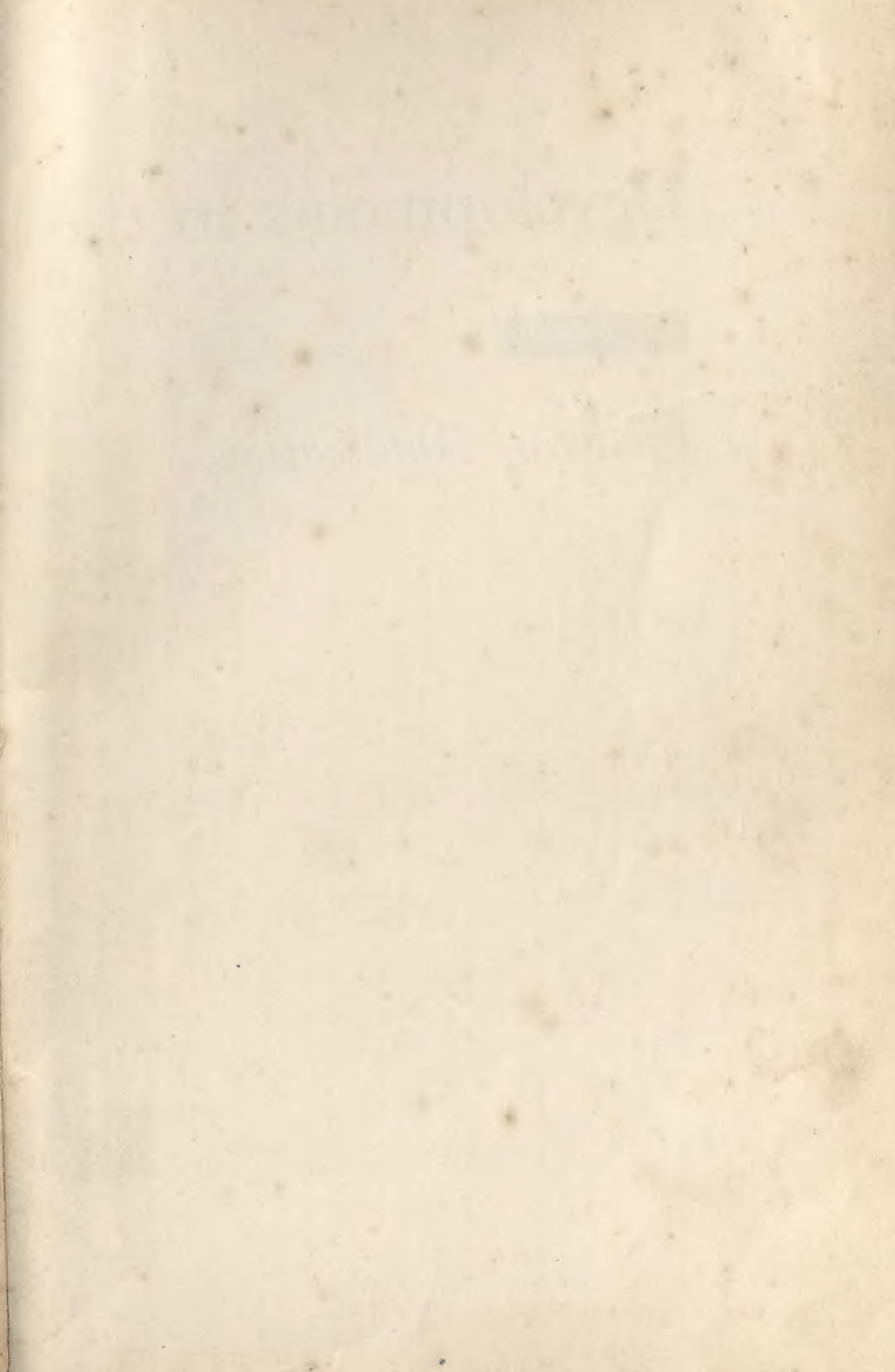
Developments in the
Rorschach Technique



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Developments in the

VOLUME II

Fields of Application



Rorschach Technique

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with contributions by

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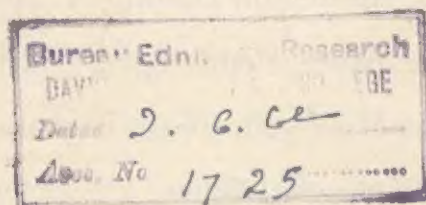
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VOLUME II *Fields of Application*

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Foreword

In the preface to *Developments in the Rorschach Technique*, Volume I, the function of Volume II was described in its broad outlines. During the course of the implementation of the plans for the second volume a variety of special ingredients was added; however, the original purpose of presenting contributions describing the application of the Rorschach technique in the fields of genetic, medical, and social psychology was carried out.

The intention of "drawing freely upon the findings of those who have used other systems of administration and scoring and somewhat differing interpretative hypotheses" received a new impetus when the editor had the opportunity, during a teaching sojourn in Europe in the spring and summer of 1954, for a most stimulating personal contact with our European Rorschach colleagues. One direct result of this contact is the inclusion of Chapter 5, which gives a sample of the exploratory-experimental approach many of our European colleagues seem to favor. This new stimulation also reinforced the desire to relate our Rorschach findings to the general stream of psychological thought, as exemplified in Chapter 4.

The remaining chapters in Part One contain the more important results so far yielded by the application of the Rorschach in the field of genetic psychology. Part One itself can serve as a good illustration of the two major limitations of Volume II. First, despite the concern of all contributors for theoretical orientation, clarification, and foundation, the statements contained in Volume II are by necessity all, or nearly all, frankly empirical. Second, even within this empirical frame of reference, we are just beginning to pile up convincing evidence for the statements made.

Because of the special conditions prevalent in the various fields of application, differences in treatment will be found from chapter to chapter. Moreover, the editor has tried to give each of the sixteen contributing authors as much freedom as possible to present his material in his own way—

though without sacrificing the integration of the total presentation. For instance, the author of Chapter 11 felt correctly that in diagnosing organic brain damage, the role of the Rorschach technique could only be discussed meaningfully by going more extensively into the background of this special field and by giving more attention to other diagnostic tools than has been done in the rest of Volume II. Any attempt to cover the application of the Rorschach technique in the field of medical psychology by mechanically discussing one diagnostic category after another would not have been fruitful, for reasons considered in detail in Chapters 9 and 10.

In general, a simple review of the existing literature with a diligent and impartial enumeration of all the findings, picayune or important, confirmatory or contradictory, would obviously not have been adequate for our purpose. On the contrary, the job of our contributors was to select from the abundant literature only those studies that are truly helpful guides to the application of the Rorschach technique in a given field, and, more important still, to point out all that is essentially lacking in the published material and to give as much help as possible in bridging these gaps from the store of their own experience. The authors do not claim to have been unbiased in selecting published data and in suggesting procedures, but they have aimed to make this bias as constructive as possible. The Classified Bibliography covering the years 1945-1955 should give any reader who has the stamina to do so a chance to check through the existing literature and determine how far we were able to attain this goal. In Part Three the principle of giving each contributing author a chance to use his personal approach to the field proved particularly fruitful.

Part Four was added as a concluding section to both Volume I and II in order to reweave the Rorschach technique, after its necessary isolation, into the general fabric of the field of projective techniques. The further step of describing the impact of projective techniques on basic psychological science was taken a year ago in a presidential address for the Society for Projective Techniques (published in the *Journal of Projective Techniques*, Vol. 18, No. 4: 1954).

As a further help in interrelating the work of the contributing authors and the whole material of Volume I and II, a cumulative detailed index has been added. The subject-matter index should be a better vehicle for this purpose than any number of cross-references in the text, and will also satisfy to some extent the need of readers who want to know what our authors have to say about various diagnostic categories.

Each chapter has its own list of references, which naturally contains only publications the authors needed for quotations or wanted to emphasize in the context of their discussions. The ten-year bibliography, covering any publications we could track down since the publication of our last bibliography, is presented in systematic order to afford an easy comparison between the lists of references following each chapter and the available literature published within the last decade. The two bibliographies published in *The Rorschach Technique*, covering the period through January 1942 and from there through September 1945, have been combined into one alphabetical list. This list precedes the new ten-year bibliography so that all the bibliographical information available at this point will be within easy reach. The search for publications by any particular author is further facilitated through the inclusion of all authors' names in the Index of Names.

As the work on Volume II draws to a close, it seems fitting for the editor to look back over the two volumes of this book and his earlier publications, and in so doing to assess briefly the recent history and present status of the Rorschach technique. The title of the present work includes the term *developments*. It is a matter of observable fact that there have been many developments in the theory and application of the Rorschach during the years since World War II. The beginning and end of that conflict were the conspicuous historical background for the Foreword to *The Rorschach Technique* and the Introduction to its *1946 Supplement*. A suspicion that the growing interest in the Rorschach technique might have been connected with a kind of "war boom" could not be entirely refuted at that time. The years that have elapsed since then have erased any such suspicion. A brief glance at the ten-year bibliography (pages 692-776) in comparison with the bibliography covering the preceding twenty-five years (pages 661-691) demonstrates the systematic expansion of the literature both quantitatively and geographically: for the twenty-five years we have listed only 786 publications; for the ten years since 1945 we have listed 1,899.

The increase of sophistication in the use of the Rorschach technique, both clinically and theoretically, can, we hope, be more readily appreciated from a perusal of the text of our Volumes I and II and of other recent works than from scanning the bibliography.

The most significant basis for this quantitative and qualitative progress in the use of the Rorschach technique is the improvement of training facilities. At the end of World War II, there were scarcely half a

dozen training centers offering adequate introduction to and supervision of the use of projective techniques in general and the Rorschach in particular. Largely in connection with the training program in clinical psychology of the Veterans Administration, and supported by the United States Public Health Service, rapid progress has been made. In the United States alone more than fifty centers now offer training in the use of projective methods. The steadily increasing number of doctoral dissertations dealing with projective techniques reinforces this picture; it further demonstrates that the practical use of the technique and the evaluation and testing of its theory proceed at the same rate.

We may add still another observable fact: the scientific program connected with the annual meeting of The Society for Projective Techniques has, during the last seven years, become an integral part of the scientific program of the annual convention of the American Psychological Association.

As a result of these broadening contacts, the controversy concerning the scientific value of the Rorschach techniques has merged with the general debate over nomothetic versus idiographic methods in all fields of psychology. This controversy was commented on in the invited address by Dr. J. Robert Oppenheimer, "Analogy in Science," presented during the 63rd Annual Convention of the American Psychological Association. Three paragraphs from this address are quoted here because they bear on the problem of the value of a technique that lacks nomothetic validation.

" . . . We inherited, say at the beginning of this century, a notion of the physical world as a causal one, in which every event could be accounted for if we were ingenious, a world characterized by number, where everything interesting could be measured and quantified, a determinist world, a world in which there was no use or room for individuality, in which the object of study was simply there and how you studied it did not affect the object, it did not affect the kind of description you gave of it, a world in which objectifiability went far beyond merely our own agreement on what we meant by words and what we are talking about, in which objectification was meaningful irrespective of any attempt to study the system under consideration. It was just the given real object; there it was, and there was nothing for you to worry about of an epistemological character. This extremely rigid picture left out a great deal of common sense. I do not know whether these missing elements

will prove helpful; but at least their return may widen the resources that one can bring to any science. . . .

" . . . This is quite a pack of ideas that we always use: individuality, wholeness, the subtle relations of what is seen with how it is seen, the indeterminacy and the acausality of experience. And I would only say that if physics could take all these away for three centuries and then give them back in ten years, we may well say that all ideas that occur in common sense are fair as starting points, not guaranteed to work but perfectly valid as the material of the analogies with which we start.

"The whole business of science does not lie in getting into realms which are unfamiliar in normal experience. There is an enormous work of analyzing, of recognizing similarities and analogies, of getting the feel of the landscape, an enormous qualitative sense of family relations, of taxonomy. It is not always tactful to try to quantify; it is not always clear that by measuring one has found something very much worth measuring. It is true that for the Babylonians it was worth measuring—noting—the first appearances of the moon because it had a practical value. Their predictions, their prophecies and their magic would not work without it; and I know that many psychologists have the same kind of reason for wanting to measure. It is a real property of the real world that you are measuring, but it is not necessarily the best way to advance true understanding of what is going on; and I would make this very strong plea for pluralism with regard to methods that, in the necessarily early stages of sorting out an immensely vast experience, may be fruitful and may be helpful. They may be helpful not so much for attaining objectivity, nor for a quest for certitude which will never be quite completely attained. But there is a place for the use of naturalistic methods, the use of descriptive methods. I have been immensely impressed by the work of one man who visited us last year at the Institute, Jean Piaget. When you look at his work, his statistics really consist of one or two cases. It is just a start; and yet I think he has added greatly to our understanding. It is not that I am sure he is right, but he has given us something worthy of which to enquire whether it is right; and I make this plea not to treat too harshly those who tell you a story, having observed carefully without having established that they are sure that the story is the whole story and the general story."

These three paragraphs express elegantly (to use a favorite term of Dr. Oppenheimer's teacher, Dr. Richard Tolman) the spirit in which the

two volumes of this book have been produced. The editor and all the contributors share the hope that their work with the Rorschach may be fruitful, may help to advance true understanding of human behavior.

BRUNO KLOPPER

Acknowledgments

The editor takes pleasure in extending his thanks, first of all, to the contributing authors, who did not spare themselves in the effort to make the coverage of the field of application as complete and as useful as possible. Secondly, grateful acknowledgment is made to all colleagues who contributed case study material. It seems inadvisable to give them specific credit for their particular contributions (case history material, Rorschach records, test reports, psychiatric evaluations, and the like) because to do so would unduly facilitate the identification of patients. As far as this case material stems from the files of the Veterans Administration, official permission for its publication has been obtained in every case.* Thirdly, the editor is glad to thank the many friends and colleagues who read drafts of various chapters, especially in Part Two. In this connection, special mention should be made of the psychology staff members of the various Veterans Administration installations in Southern California. Finally, the editor wishes to thank Carl J. Nitsche and Edward T. Parsons for their fine cooperation in allowing me to cross-check the bibliographies against their *Index Bibliography on the Rorschach Technique* (published by University Microfilms, Inc., 1955). Further comments on their work will be found in notes preceding the bibliographies (page 660) and the indexes (page 778).

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- CHAPTER 2 The Interpretation of Children's Records
- CHAPTER 3 Rorschach Reactions and Child Therapy: A Case Study
- CHAPTER 4 The Psychological Significance of Age Patterns in the Rorschach Records of Children
- CHAPTER 5 The Development of Perception in the Rorschach
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- CHAPTER 7 The Application of the Rorschach Technique to Geriatrics

Problems in the Use of the Rorschach Technique with Children

Problems of Methodology

The application of the Rorschach technique to the study of child behavior and development raises problems with respect to the methodology of the Rorschach technique. Other problems involve the question whether the prevailing technique of administration can be extended, without modifications, from the adult to the child; still others deal with the scoring criteria to be used in dimensionalizing and quantifying children's records.

The literature on the Rorschach technique contains reports on many scattered attempts to present age patterns as reflected in the Rorschach protocol. It was not until 1952 and 1953 that major efforts were made to present this problem in a comprehensive and systematic manner. In these years there appeared works by Halpern and by Ames and her associates.

Halpern [2] concentrates her efforts almost exclusively on presenting the clinical point of view. She exemplifies the typical and representative record and discusses its implication for the functioning of the child of a given age. On the other hand, Ames *et al* [1] have set as their goal a comprehensive statistical analysis of scorable Rorschach behavior and have accumulated a considerable amount of very useful data. Both attempts highlight orientations widely held in the

field of psychology, orientations sometimes conceptualized as the idiographic versus the nomothetic approach to the study of psychological phenomena. The clinical point of view emphasizes the limitations of the statistical approach, its atomistic nature, the lack of adequate statistical tools in dealing with patterns and configurations, the disregard for qualitative clues that cannot be dimensionalized, and others. The statistical point of view emphasizes the limitations of the clinical approach, its necessary subjectivity, its sensitivity to the investigator's bias, the dangers of over-generalization inherent in it, and the difficulties of verification. We do not believe that the two views are as antithetical as may appear. It seems to us that the two approaches are complementary, standing in a reciprocal relationship. The clinical approach sensitizes us to what is significant in behavior and thought and provides us with concepts. The statistical approach tests the applicability of these concepts and their generality. Statistical findings help us to reorient ourselves, to critically examine our concepts, to redefine them where necessary, and to refine them where possible. The clinical approach gives us an understanding of psychological structures; the statistical approach must find and devise the mathematical means of dealing with structures.

The combination of these approaches brings into focus a series of methodological problems which have plagued the field for a long time. Two of these problems will be discussed in this chapter: (1) conceptual versus statistical definitions of certain dimensions of the Rorschach; (2) longitudinal versus cross-sectional sampling. (See Chapter 9 for a discussion of other methodological problems.)

Conceptual versus Statistical Definitions

A number of Rorschach researchers hold the view that many dimensions of the Rorschach are to be defined by statistical means—that, therefore, they depend on population sampling and need to be standardized. We do not hold this view. We are of the opinion that almost all dimensions of the Rorschach are conceptually defined dimensions and, consequently, have attached to them a conceptually defined meaning that is consistent, no matter in what population group they are found. As an illustration of the implications the two

views entail, we shall discuss their application to the problems of location, form level, and popular responses.

Location

Some investigators believe that one must redefine the usual detail for each age group. They assume that the dimension called *usual detail* is a statistically defined dimension, depending for its definition upon the frequency of occurrence in a standardization group, and which must be redefined for each new standardization group. We do not subscribe to that view. We hold that the dimensions of the Rorschach are the result of the phenomenological analysis of the blot properties (see Chapter 9) and are, therefore, conceptually defined dimensions rather than statistically defined categories. What is sometimes misleading is the unfortunate choice of words in the naming of these dimensions. For example, the dimension of *usual details* is not primarily defined by the frequency of its occurrence in a random sample of the population; it is defined phenomenologically as a natural articulation of the blot material into subdivisions of insular or nearly insular shape. On the other hand, *unusual detail* is defined as an arbitrary, idiosyncratic subdivision of the card, without regard to the card's natural organization. Again, there is no reference to the statistics of its occurrence; the definition is conceptual.

That usual details are actually chosen more frequently for responses than other areas by a random sample of subjects is a finding essentially incidental to our problem—even though, perhaps, an expected one.* It certainly is interesting to find out whether some of these areas are chosen more frequently for responses at certain age levels than at others. It seems contrary to good logic, however,

* One may, of course, raise the question whether one should check by statistical means whether the phenomenological analysis of the blot by the test constructor agrees with the phenomenological analysis by the normal adult. This is a perfectly justified question. But one must not confuse this question with the frequency with which responses are given to such blot areas. A particular area may be picked by 90 per cent of all subjects to be a natural subdivision of the blot, yet it may be picked by only .001 per cent of all subjects for a response because the shape of this subdivision does not lend itself easily to be matched to a percept. In order to find an answer to our question, we must present the cards to our subjects with carefully worded instructions that they subdivide the blot into its natural articulations.

to redefine the dimension of *usual details* by statistical means and then to apply to it the interpretative meaning of the conceptually defined dimension of *usual details*. The situation becomes even more confused when the chosen population sample is non-random and when the technique of scoring is arbitrary rather than based on the response processes of the subject. If one would follow such a procedure, one might come up with the finding, for example, that approximately 50 per cent of all two-year-old children are using *large usual details*. This finding is perfectly legitimate; however, we must keep in mind the manner in which we arrived at the finding, in order to be able to give it some meaning. It would not be in accordance with good logic to apply to it the hypothesis attached to the conceptually defined dimension and conclude that the two-year-old child is a factually-minded individual who recognizes the demands of everyday reality. Such a conclusion contradicts not only good logic but also our empirical knowledge of the qualities of the two-year-old.

Form Level

In the area of form-level rating, the statistical problem was first pointed out in *The Rorschach Technique* [3, pages 435 ff.]. There, the opinion was expressed that statistics may be used for exploratory purposes and subsequent research, but not for the definition of the dimension of accuracy. The goodness of fit between the blot area chosen and the object projected thereon seems to be a matter of congruence between the form of the object, as depicted in a dictionary or an encyclopedia, and the shape of the blot. Such congruence may be gross, or may be specified in great detail, or there may not be any congruence at all.

This problem is a particularly important one in the study of the development of reality testing in early childhood. A certain word used by a child as a response is a much less reliable indicator of his percept than is the case with an adult. For example, children may see a bat in Card I. When they are provided with an opportunity to specify their response, however, they will furnish a beautiful illustration of a confabulatory combination. They will designate the cen-

ter area as a body, the sides as wings, and the white spaces in the center as eyes and mouth. Or a child may see a bat on Card V and specify an extra pair of legs in the side *d*, a response also given occasionally by paranoid schizophrenics. Although responses of this type are given very frequently by children of a certain age, no one would maintain that the bats they specified show a high degree of congruence with illustrations in the *Encyclopedia Britannica*. It is, of course, highly important to establish how common such incongruencies are at the various age levels. Such findings are valuable because they shed light on the developmental progress of perception, concept formation, and reality testing.

There is no logical reason against making a statistical redefinition of *good form* for each age level on the basis of the frequency with which a given response occurs. But, in such a case, the finding that over 50 per cent of the two-year-old population uses *good form* is not exactly a finding but largely a restatement of the statistical definition. What we are dealing with here is not, really, *good form* but *average form* for the particular age level. And this average form may be very far removed from good form in the sense in which we understand it: namely, in the sense of congruence between blot form and image form. Thus, again, we shall have to find a meaning for this average form from the manner in which it has been gained. We are not able to apply to it the hypothesis attached to the conceptual definition; that is, we cannot say that the child is well-grounded in reality, that his reality testing is adequate, that his thinking is well organized, and that he understands relationships.

It may be said that the scoring of form level, on the basis of the accuracy of the match between blot form and object shape, may leave a great deal of room for subjective judgment on the part of the examiner. This is true. It is also true, however, that the use of the X ray leaves a great deal of room for subjective judgment and error, unless the radiologist is thoroughly trained. We can ask whether the preparation of special tables of concepts with *good form*, on the basis of statistical frequency, is a happy solution and tends to eliminate this subjective element. In any given sample of a population, it may happen that 16 out of 20 subjects see a bat in Card V. Con-

sequently, by its statistical incidence, this must be a concept of good form. However, when we ask these subjects to specify their responses, we end up with 16 differently-seen bats, some of which may have very poor form (such as an extra pair of legs at the tips of the wings). Thus, it seems to us, there is no way in which we can avoid the use of the examiner's judgment. This is not as serious as it may sound. In practical situations, it will be a rare occasion, indeed, when one well-trained Rorschacher will evaluate a given response as having good form and another equally well-trained Rorschacher will evaluate the same response as having poor form.

It is an entirely different question when we are concerned with the problem of how many specifications the adult of average intelligence uses in order to elaborate his responses. In the establishment of a baseline for the scoring of form level, we have assumed (relying on our apperceptive mass) that the adult of average intelligence uses an average of three constructive specifications—for example, body, legs and head. Here we are concerned not with a problem of definition but with a problem of observation. A statistical test of this assumption seems not only proper but necessary.

Popular and Original Responses

The only scoring dimensions in the Rorschach technique that seem to us clearly and unequivocally defined in a statistical manner are the dimensions of popular and original responses. From the popular responses we obtain some insight into the culturally given stereotypes. For that reason, it is quite important to redefine these dimensions for various age groups by means of restandardization. Such a procedure will help us gain insight into, and understanding of, the stereotypes of childhood, their formation, and their transformation. It will also help us gauge to what extent any given child is able to think along the lines of his own age group.

On the other hand, the scoring of the responses of children along the dimension of populars, as defined for adults, should not be neglected. It seems just as important to find out at what age, to what extent, and in what manner, the child absorbs the stereotypes of the

adult world that surrounds him, as it is to ascertain what stereotypes he produces in his own culture.

With the introduction of the refined scale of form-level rating (from -2.0 to 5.0) the scoring of originals in the protocols of adults has lost much of its importance, since the originality of the subject may be measured and understood in a much better way from the form-level ratings. This is not the case with preschool children, since half of the responses of even the five-year-old are expected to have minus form-level ratings. Thus the scoring of responses along the dimension of originals remains important. However, it seems an almost impossible task to provide the necessary statistical underpinning for such scoring. One obviously cannot prepare a table of responses that occur only once in a hundred records for each age group; this would be a never-ending task. One can only prepare tables of responses that occur more than once in a hundred records. But to score by means of such tables would be prohibitive in time and effort. The examiner can solve this problem by relying on his apperceptive mass. While this seems very subjective, it is also very practical. For research purposes, one can always establish an inter-tester reliability coefficient and throw out those scores that do not meet the minimum reliability criterion.

Longitudinal versus Cross-Sectional Sampling

Another important methodological problem highlighted by recent publications is that of longitudinal vs. cross-sectional sampling of the Rorschach performance of children.* The aim of both approaches

* Most researchers are following what we believe to be the conventional meaning of these two terms. By *longitudinal* study we understand the study of the same children over a period of many years, with tests given at regular and predetermined intervals. By the *cross-sectional* approach we understand the testing of a different group of children at each chronological age level. Thus the longitudinal study takes many years to complete, while the cross-sectional study can be completed within a relatively short time span. It is, perhaps, unfortunate that Ames *et al* [1] have not followed this conventional definition, because it may lead to confusion. The volume is offered as the "most comprehensive longitudinal study yet reported" (book jacket). It seems to us that the method used was cross-sectional. However, the language describing the selection of subjects is not very clear on this point. "Fifty children, 25 boys and girls, were seen at each of thirteen different age levels: half-yearly levels from 2 to 6 years, and annually thereafter through 10 years of age." [1, page 23]

is the discovery of patterns of performance that are typical of certain age groups. The goal we hope to achieve is that our study will enable us to catch a glimpse and a beginning understanding of the lawful process of maturation of the personality organization and its functions. A broad mass of data on the maturation of anatomical structures and their functions does indeed confirm the existence of regularity in the process of development. Studies of single psychological functions demonstrate that such regularity seems to obtain also in the psychological realm and lead us to believe that the personality structure as a whole, as well as the multitude of its functions, is subject to a lawful unfolding. It is perhaps needless to say that the findings of psychoanalytic investigations lend a great deal of substance to our belief. But from the studies of physical maturation we also learn that great individual differences exist with respect to the rate of development, the time at which certain functions make their appearance, and the serial order of their appearance. In view of this knowledge, it appears to us that the longitudinal approach is the method *par excellence*.

The longitudinal approach, however, has its difficulties. Perhaps its greatest drawback is the time factor involved. Moreover, subjects tend to drop out over the years. Others have to be dropped because, despite careful selection of the sample, they develop deviant behavior and psychopathological symptomatology and cannot be used for a study of the normal maturational process.

The cross-sectional approach has the advantage of eliminating the time factor involved in the longitudinal method. Its great disadvantage lies in the fact that the picture obtained is a blurring of various rates of growth.* In order to overcome this difficulty, it is necessary to fulfill a variety of conditions, two of which seem to us most important. First, the study ought to include a large number of subjects, so that the magnitude of the trend overshadows the mag-

* One must not confuse this problem of age pattern with that of standardization; the two problems are of an entirely different order. The goal of the first is to discover regularities in maturation; the goal of the second is the establishment of mean performances. The former requires careful exclusion of psychopathological subjects, the latter their proportional inclusion.

nitude of the scatter.* Secondly, it should carefully exclude children who show psychopathology, because we are bent on discovering the "normal" trends of maturation.

Of course, the two approaches are not mutually exclusive. On the contrary, they are complimentary. The data obtained by means of the cross-sectional method should be carefully checked with the data obtained by longitudinal studies, and vice-versa. Only in this way can we be sure of the ground upon which we tread.

Unfortunately, none of the studies published so far fulfill these rigorous conditions. There seems to be a particular dearth of carefully designed longitudinal studies, as the bibliography will reveal.† The evaluation of the published studies seems, at present, a thankless and almost impossible task. The critical reviewer is not only confronted by a multitude of scoring systems which are not mutually translatable; the quantitative findings are so replete with the consequences of the researchers' methodological orientation with respect to administration and scoring that a comparison of findings seems almost impossible. Some of the issues involved have been discussed above; others will be discussed later.

The presentation of some age-patterns, in the next chapter, is not supported by statistical data. They have been gleaned from the perusal of thousands of records in consulting situations. They are of-

* An inspection of the tables published in Ames *et al* [1] will furnish an excellent demonstration of the necessity for such a requirement.

† This is a dearth in publications, not in research activity. The authors have been personally in contact with more than a dozen large-scale research projects in which Rorschach records were collected routinely. To mention just a few: Fels Institute, Antioch College (T. W. Richards); Shady Hill growth study, Harvard University (Nevitt Sanford); Jean Jacques Rousseau Institute (M. Loosli-Usteri and M. D. Soares); Study of Adolescence, Progressive Education Association (Caroline Zachry); Department of Psychology, Sarah Lawrence College (Lois Murphy); Berkeley Guidance Study, University of California (Jean Macfarlane); University of Colorado Medical School (A. Hilton); Department of Psychology, Vassar College (L. J. Stone); Rusch Foundation Study, Western Reserve University (Marguerite Hertz). The few studies that have seen the light of publication either limit themselves to the study of individual children, as the one by T. W. Richards, or do not go beyond the statistical manipulation of the traditional Rorschach scores, and thus leave the better part of the available information on the growth of personality untapped. One cannot help admiring the fortitude of Ames *et al* in breaking this deadlock, even at the price of exposing themselves to criticism. We hope that others will soon follow suit and publish their reports.

ferred as tentative approximations, subject to rigorous experimental investigation. We hope that the discussion of the methodological problems involved in the study of age patterns will contribute to the clarification of these issues and thus pave the way for the publication of more extensive research. (See also Chapter 5.)

Problems of Administration

Some Rorschach workers, in discussing the use of the Rorschach technique with preschool children, give the impression that they consider this a unique field of application, which not only poses special problems in administration and scoring but also demands a special kind of skill—a skill that cannot be automatically transferred from Rorschach experience with other subjects. As a result of this prevailing attitude, some authors go so far as to demand the standardization of unique procedures, tailor-made for early childhood, and different in *principle* from the standardized procedures for the Rorschach technique in general. We can try to understand this attitude, but we cannot share it.

The use of the Rorschach technique rests—more than in the case of many of the more structured test situations—on verbal communication between examiner and subject. In dealing with very young children, we come face to face with a stage in their development where the capacity for verbal communication is at its very beginning. We encounter the attitude that the difficulties in verbal communication constitute an obstacle to the use of the Rorschach technique with young children, and must be overcome by a variety of restrictions and modifications of the standard technique of administration as used with adults.

Actually, the gradually developing ability of the young child to communicate, verbally and otherwise, is one of the most important aspects of the growth process which we want to study. We should, therefore, welcome the child's difficulty in communication as an important source of information, rather than viewing it as an undesirable obstacle.

As we shall show in the following sections, the standardization of procedures for the use of the Rorschach technique can be maintained in principle; only the communication of our instructions has to be made more flexible. However, this is not a unique necessity; the same necessity prevails in the majority of clinical uses of the Rorschach technique with adults (as, for example, in its use with psychotic and physically handicapped subjects) and in its use in anthropology, industrial psychology, and some consulting situations.

The extension of the standardized Rorschach procedures to young children offers an important advantage in that it enables us to study in detail the differences between the personality structure and functioning of the child and that of the adult. It also obviates the necessity of demonstrating that the modified procedures are operationally equivalent in their effect to the standardized procedure for adults. Without this, a comparison of the child and the adult rests on very shaky legs.

Minimum Age Limit

A question often raised is, "What is the minimum chronological age at which a Rorschach can be successfully administered?" Opinions vary on this point from the conservative few who hold that the Rorschach technique cannot be used with children until they reach at least school age, to those who think that it is a useful diagnostic tool with children three years of age and older. Ames *et al* found that "even as early as two years of age individuality factors do make themselves apparent." [1, page 285]. Meaningful Rorschach records have been collected from children 15 to 18 months old. Our own clinical experience seems to indicate that a meaningful Rorschach record can be obtained from any child who has reached a mental age of three.

Presentation of the Material

A number of clinicians have found it necessary to devise special techniques in introducing the Rorschach cards to the preschool child. Some have felt the need to introduce a "trial" or "home made" ink blot, by means of which they hope to orient the child with re-

spect to the task that is to follow. Others are of the opinion that the examiner must impress upon the child that the blots are "not really pictures."

In our clinical experience, we have never encountered the need to depart from the standard administrative procedure, except to gear the language to the level of the child's comprehension. With children below the age of four, particularly, we found some such phrasing as the following an adequate introduction to the blot material: "I'm going to show you some pictures; you tell me what they are or what you see in them." We believe that most modifications, especially the attempt to explain to the child that the blots are "not really pictures," and above all, all restrictive instructions (short of keeping the child from tearing up the card) tend to confuse and irritate the child and actually exert an inhibiting rather than a facilitating effect upon the child's productions.

Our clinical impressions have convinced us that the change in wording from "ink blot" to "picture" provides the child with an appropriate task orientation, yet does not seem to modify standard procedure. We feel, however, that this problem should be subjected to research. The beginning of such research is found in the published articles dealing with the influences of set and examiner on Rorschach responses.

Prodding and Encouragement

Another important problem in the administration of the Rorschach technique to young children is the degree of encouragement and prodding that is permissible in the performance proper. Some clinicians are of the opinion that the examiner must prod and encourage freely in order to obtain from the child a "rich" record. It is certainly important to elicit as full and rich a record as possible. However, we believe that this should not be done at the price of sacrificing the standardization of the administrative procedures and of validity. In line with the frame of reference adopted in Volume I (pages 3-18) with respect to the administration of the Rorschach technique to adults, we believe that the child's free and spontaneous response, or lack of response, to the cards affords an invaluable op-

portunity to observe and evaluate his functioning in a permissive atmosphere. This procedure permits us to observe the changes in the child's behavior during the inquiry, when he is under mild pressure to elaborate his responses and when he is given an opportunity to indulge in additional responses. Often, children become less inhibited after the performance proper and produce rich material in associating to their responses. Other children, of course, remain inhibited during the inquiry, while still others produce a rich record in the performance proper. It is evident that these differences in behavior are significant. We should deprive ourselves of very valuable data were we to combine the performance proper, the inquiry, and the testing of the limits in one conglomerate procedure.

The Inquiry for Location

The first question that arises is when to conduct the inquiry. Rorschach workers differ greatly in their opinion as to when and how this ought to be done. Some of the researchers hold that the inquiry ought to be conducted after each response, or, at the latest, after each card. They believe that the child has a short memory span and that, as a consequence, the child will have forgotten his responses if the inquiry is conducted in a standardized manner—that is, after the performance proper. We do not subscribe to this view. Through exploratory experiments, we have ascertained that the very same children who are not able to show the examiner the location of their responses in the routine inquiry and who, in fact, seem to have "forgotten" what they saw and to have replaced their response by a new one, act in exactly the same fashion when the inquiry is conducted immediately after they have given a response. In our experience, we have found it informative and convenient to conduct the inquiry after the performance proper, even with the youngest of children.

The next question is how to conduct the inquiry. Most children below four years of age have not reached the stage of analytic apperception that permits them to isolate details from the total stimulus context. If the examiner asks them where they saw what they saw, they will put their finger upon the part of the card that appeals

to them at the moment. They may do it in obvious confusion or, depending on their temperament, with stubborn pseudo-decisiveness: "There!" One way in which to ascertain whether or not the child means such a gesture as a realistic response to the query is the following: The examiner asks him, on his level of comprehension, for specifications of his response. For example, if the child sees an animal—which is most frequently the case—the examiner needs only to ask where its body, head and legs are; if he sees a mountain, the examiner merely has to ask for its top and bottom. In the majority of cases, where the child responds at all in an understandable way, the reaction will convincingly demonstrate to the examiner that the response was meant as an arbitrary whole, a confabulatory whole, or a confabulatory combination whole response, no matter what part of the card the child's finger touched previously. It might be an intriguing little side project to find out what attracted the child to the point where his finger touched the card.

Another way of demonstrating the nature of the child's response is the following: In testing the limits, the examiner points to the prominent areas of the card, one at a time, and asks the child, "Which part of the — is that?" Almost invariably, the child will demonstrate that he included that part in the response. If this question seems too "loaded," the examiner may try "Is this part of the —?" The answers will be substantially the same as to the question suggested above.

The Inquiry for Determinants

To elicit information concerning determinants from children below four years of age is likely to be even more difficult than to get information about location. However, work with young children only highlights the experience accumulated in work with adult subjects: namely, that it is more practical and convenient to shift the emphasis in the search for determinants from the routine response-by-response inquiry to the analogy and testing-the-limits phases of the administration. This takes a great deal of the annoyance and frustration of the examiner and the subject out of the testing situation. Annoyance and frustration are even more deadly when work-

ing with young children than in work with adults. This mode of procedure permits the examiner to be much more systematic and, in that sense, more objective in the gathering of his information. This is so because it gives his question about determinants a clear and communicable frame of reference, instead of compelling him to prod in the dark for each response with such questions as "What made you think of it?" "Was it only the shape?" "Did anything else help you to see it?"

Another experience (crystallizing in the work with adults over the last twenty years, which is of special importance in the work with young children) is the necessity of pointing all the questions in the inquiry and the analogy period to the card material, rather than to the subject. To put it simply: Instead of asking, "Why did you . . . ?" we should ask, "What in this *picture* was it that made you . . . ?" In fact, work with young children has been most helpful in driving this lesson home because they have no hesitation to answer your "Why . . . ?" by a simple "Because." Perhaps many adults would like to do the same, but don't quite dare to do so; some retaliate, instead, with annoyingly evasive answers.

The younger the child, the more likely it is that we will have to rely on information gained from testing the limits, instead of the analogy period, because the instances where a child spontaneously mentions any determinants are very few indeed. It is almost impossible to communicate to a young child the concept of a determinant he has not mentioned; and we simply have to use definite responses, including specific determinants, as a starting point in testing the limits. Even there, we have to be careful to choose the right cue. We may fail to get a response to the testing-the-limits question as to whether the child can see walking bears, but the same child may be very happy to show you walking animals and then tell you on his own what kind of an animal he sees.

The most successful cue responses seem to be the people in Card III, the walking animals in Card VIII—holding the card sideways for the child—and the red hair ribbon in Card III. The animal skins in Card IV and VI rarely produce positive responses below four years of age; it is always safer to use one of these cards first,

and then to cross-check with the other, with such questions as "Which fur looks softer?" The child's answer may not yield any information about his ability to use shading, but it will always be interesting.

Problems of Scoring

One of the most difficult problems facing the examiner in the administration of the Rorschach technique to children is the fact that it is often not possible for children below four years of age to verbalize the location and the determinants for their responses. The question that arises is whether the examiner should guess from the child's response what scoring dimensions are involved, or whether he should score only what the child is able to verbalize. The answer depends, to some extent, on the examiner's bias. Certainly, to guess at the dimensions gives even the experienced clinician ample opportunity to score his own protocol, rather than that of the child. Neither does this procedure contribute to the reliability of the system of scoring. Moreover, one may easily fall into the trap of assuming that the blot properties that the adult can freely verbalize as having been important in the determination of his response also determine the similar response of a child. For example, "smoke" is a rather frequent response of children to the shaded cards, particularly to Card VII. Many adults who give such a response indicate that the shading has something to do with the response. Are we permitted to extrapolate from our experience with adults and assume that the shading also determines the child's response? At first, this may seem quite reasonable. But on second thought we begin to realize that weighty theoretical considerations speak against such a procedure. What we are interested in finding out, when we use the Rorschach technique as a tool in the investigation of developmental trends, is how the personality organization of the adult comes about. In extrapolating from the adult to the child, we actually put the cart before the horse and provide an answer to the question before we have even begun to ask it. What we want to discover is when the

child first becomes *aware* of the presence of the shading property of the card to the extent that he can utilize it in a response. It is the *awareness* that is crucial. What the Rorschach technique reveals, primarily, is the ego structure of the personality; and what is ego-connected can, to some degree, be made conscious. The scoring of the Rorschach protocol is based on the implicit assumption of this premise. Thus, in order that a particular location or determinant can be scored, two conditions must be fulfilled: the subject must have some awareness of the blot property, and he must be able to utilize this property in a response.

That does not mean that the clinician should not be sensitive to the variety of nuances with which the subject responds to the blot property; on the contrary, he must be most observant of these reactions. However, they are not all scorable. Let us consider, for a moment, the variety of reactions adults may display toward the center *D* of Card III. One subject calls it a "red bow tie." The next calls it a "bow tie"; as a sort of afterthought he also mentions that the red color may have had something to do with it. The next subject calls it a "bow tie"; in the inquiry he specifies that the shape reminded him of it. In the testing of the limits, when the color is pointed out to him, he concedes that this could be a red bow tie. The next subject also calls it a "bow tie"; in the inquiry he only specifies the shape, but in the testing of the limits he exclaims, "The color has nothing to do with it! No bow tie is that red!" The fifth subject also sees a "bow tie," and adds that "the color is all wrong" and that "it should be black instead of red." Here we see five different reactions to emotionally charged situations. However, only the first two may be scored *FC*; the first as a main *FC*, the second as an additional *FC*. The interpretative hypotheses attached to the various scoring dimensions of the Rorschach record can have meaning only if the scoring remains consistent. It is for this reason that one should insist that a response be scored only if the three basic conditions for scoring are present: (1) the subject shows some awareness of the blot property; (2) he uses it in the response; (3) these principles are followed in the scoring of all responses, regardless of what source the responses are obtained from. This implies, of

course, that the subject must be able to communicate to the examiner, in some way, that he has used a particular blot property in his response. Whether he does this by verbalizing, or by rubbing his finger over the shaded area of Card VI and saying he can touch the fur, is a secondary matter. In each case, he demonstrates to us that he has some awareness of the blot property and that he has used this property in the response.

The conclusion to be drawn from these considerations is simply that in most records of children under four years of age, many aspects of their responses must be scored with a "?" rather than with a location or determinant score. It would be as wrong to score a determinant of which the child is not aware as it would be to score a pure *F*, indicating thereby that the child has not used the shading or color characteristics of which he could have been aware. This cautious form of scoring cannot be a handicap in the interpretation of the individual record where we have to use so many unscorable nuances anyway; it will be a research handicap only to a psychologist who limits his research to the statistical evaluation of conventional scores.

We feel, therefore, that guesswork has no place in the inquiry, regardless of whether our subjects are adults or children. However, this viewpoint is not shared by all workers in the field. To quote, for example, from Ames *et al*:

Most of the information necessary for scoring was obtained by asking *safe* questions immediately after the full response to each blot.

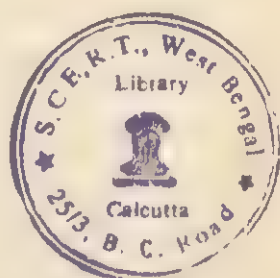
Preschool children were instructed: "Put your finger on the ____." In many instances, it was felt that any checking would disrupt the flow of the test, therefore the inquiry was not forced, and *the exact location was judged by content, or direction of the child's regard*. [1, pages 26, 27. Italics ours.]

Naturally, the difficulties discussed above rapidly disappear in most children after the fourth birthday. From there on, we expect a high negative correlation between the number of question marks and the skill of the examiner in establishing communication with a young child.

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The Interpretation of Children's Records

Preliminary Considerations

As in Rorschach interpretation in general, the most important and most difficult task for the researcher in child development is the translation of his Rorschach findings into a description of personality organization and psychological processes. In the pursuance of his task he must be cautious and circumspect; he must carefully steer between the Scylla of the "cook-book" and the Charybdis of "intuition."

In the cook-book approach, every "sign" has its definite meaning. We merely make a statement about each sign, combine the statements, and end up with a description of a personality. For example, high $F\%$ indicates constriction, high $A\%$ means narrowness and stereotypy; therefore, the person is a narrow-minded, stereotyped, rigid individual. In this way, the two-and-a-half year old child may appear, for example, "rigid and unable to adapt to the demands of the outside world." On the other hand, the three-year-old may appear "conforming, considerate, interested in adults, capable of some degree of empathy, and somewhat self-controlled." [1] One wonders what kind of creature it is that in the space of six months changes its rigidity into flexibility, its inadaptability into adaptability. Perhaps this chameleon wasn't really "rigid and inadaptable" at all; the best indication that this is the case is the tremendous transformation that supposedly took place within the space of six months. Such transfor-

mation can occur only in a highly flexible and adaptable organism. Psychologically, there is a vast difference between stubbornness and negativism and "rigidity," as there is between defiance, self-assertiveness, selfishness, and "inadaptability." "Rigidity" is a clearly-defined, psychological term. In psychoanalytic terminology, it refers to the inflexibility of character-defensive attitudes; in Lewinian terms, it refers to the inflexibility of boundaries in the inner-personal regions, which provides an obstacle to the flowing of energy from one region to another. Neither of these psychological states can be observed in the two-and-a-half year old child.

In the misunderstood "intuitive" approach, the clinician free-associates to the subject's responses. From the context of his free associations he infers "unconscious dynamics," and these are then presented as a description of the personality organization, the "dynamics," and the "conflicts" of the subject. When one reads the reports of this "intuitive" type of clinician, one becomes easily bored; they all sound alike, regardless of whether the subjects are adolescents, adults, seniles, or children.

The case of the two dangers facing the clinician in the interpretation of Rorschach findings has intentionally been overstated. Hardly any clinician misuses the Rorschach technique that grossly. But the "ideal-type" of our errors must be emphasized, so that we may become *aware* of the errors we all commit in everyday practice.

In our opinion, the best way to avoid these dangers is to have a sound understanding of personality theory, a thorough comprehension of the psychological processes reflected in the Rorschach protocol—particularly in its structural aspects—and a sound rationale that connects the two. (See "The Phenomenological Approach," Chapter 9, page 275.)

If one understands these aspects and their connection, then it becomes clear that "high $F\%$ " by and in itself does not mean very much. It points toward an affective impoverishment of the ego-structure, but it does not reveal the specific meaning of this impoverishment. The meaning of "high $F\%$ " depends upon the context in which it occurs. That is, we must also consider the form level of the responses, the color and shading reactions, and all the other indices

and nuances we have learned to recognize. Only in this way can we establish whether this impoverishment of the ego-structure is due to rigid compulsive defenses, severe repression, affect-lame intellectualization, organic disorganization, anxious exhaustion, arresting of development, or the beginnings of ego-formation and emotional integration. Only this last meaning seems to be applicable to the situation of a two-and-a-half year old child.

Current Trends in Interpretation

Within the covers of the two volumes of *Developments in the Rorschach Technique*, samples of several approaches to an understanding of children's Rorschach records are given or discussed:

1. Meili's contribution (Volume II, Chapter 5) illustrates the exploratory-experimental approach prevalent in European psychology.
2. Anderson and Higham survey (Volume II, Chapter 6) the actual use of children's records in child guidance.
3. The senior author of this chapter attempts in Chapter 16 of Volume I ("Rorschach Hypotheses and Ego Psychology") to speculate about genetic phases in the development of constructive ego functions and their reflection in Rorschach records. This includes the topics of reality-testing and mastery (page 589), emotional integration (page 590), and self-realization (pages 574 and 594).
4. The statistical approach, represented by Ames *et al* [1], has been discussed in the preceding chapter.
5. The approach by Halpern [3] combines the speculative method with some clinical, empirical insights. The same is true for Vorhaus' approach [4].
6. Fox attempts (in Chapter 4) to trace the psychological significance of age patterns by relating Rorschach findings theoretically to other findings in child psychology.

The question arises whether all these approaches to the interpretation of children's records are based on principles different from the

interpretative hypotheses presented in Volume I. In answering this question, we have to investigate our interpretative procedures, step-by-step:

a. The phenomenological analysis (see Chapter 9) of a child's Rorschach record, for the purpose of obtaining clues to the structural aspects of the child's personality, must proceed in the same way as in the case of adults.

b. The hypotheses used in combining these clues and connecting them to these structural aspects of personality organization are again the same.

c. The *inferences* drawn from this structural personality description, applied to everyday functioning of the individual within the setting of his developmental age level, bring into sharp relief the differences between children and adults.

In concrete terms we are first interested in categorizing children's Rorschach responses in the usual way (form, color, shading, movement, and so on). Second, we concentrate on qualitative aspects of these responses in the sequence analysis. We combine these results in order to visualize the specific characteristics of thought and affective processes and their structural organization. Finally, we are interested in what this organization may mean in terms of the everyday behavior of the child, his reaction to the environment, and the status of his development.

We are only beginning to have some ideas about the sequence of genetic phases within the various areas of ego development. We need knowledge and conceptualization concerning these phases in order to find the cut-off point between normal development, its acceleration and retardation, and disturbances that interfere with it.

Future Rorschach research with children will have to contribute a great deal for the clarification and conceptualization of such phases of development. At the present stage of knowledge, or lack of it, it is difficult to give a systematic presentation of interpretation problems connected with age patterns. There is only one area, within the relatively limited time span of the preschool ages, where age patterns have emerged sufficiently to be ready for conceptualization. This is the area of the development of concept formation.

Meili approaches this in an exploratory-experimental manner (Chapter 5). We shall present our own conceptualizations of Rorschach patterns in the development of concept formation in the following section.

The Development of Concept Formation

The development of concept formation is the best empirically established component among those contributing to the existence of age patterns in Rorschach records for children two to seven years of age. Most publications dealing with Rorschach records of these age groups agree on the following sequential steps, which reflect the development of age patterns:

Magic-Wand Perseveration

The two- to three-year-old child pays little attention to any of the differences in the stimulus material offered by the ten Rorschach cards, even though we can assume—and demonstrate in the testing-the-limits procedure—that the child is perfectly able to recognize such differences when they are pointed out by the examiner. The test situation is obviously a puzzling one to the child of this age. He handles this perplexity in either of two ways: (1) He perseverates (as if he had a magic wand) any concept brought up by the first card and repeats the same concept whenever a new card is given him. (2) He gives more than one chain of magic-wand perseverations. (3) He rejects all puzzling cards and gives only a few responses when he feels more sure of his ground.

It can be safely assumed, both on grounds of clinical observation and statistical evidence, that a four-year-old child who continues to show traces of magic-wand perseveration is reacting emotionally and conceptually below his age standard. There is one exception: a color response given to the last three cards is likely to be perseverated, normally, throughout the fifth year of life.

Confabulation

At about four years of age, most children mention at least one stimulus element, in the majority of the ten cards, to which their response can be intelligibly related. In fact, if this state of affairs does not prevail at the chronological age of five (with the exception of the color perseveration just mentioned) it can again be assumed that the child's Rorschach record reveals a response pattern below his chronological age. This even takes into account the assumption that the average IQ of the research subjects upon whom the finding is based is probably above 100.

Bohm [2] suggests that there is a relationship between these responses and the *pars-pro-toto* interpretations made in everyday life. Ames [1] found that the confabulation noted at age four is more clear-cut than the confused confabulatory thinking of the earlier years. At four-and-a-half, she found, the number of confabulations decreases; greatly confused concepts persist. Examples of the latter are: "fish with two heads," "dog with head at both ends." She reports the existence of considerable confabulation at the age of seven; but this type of response, along with the tendency toward perseveration, disappears around the age of eight. This is accompanied by a need for "exactness and to believe that the blot represents certain things." She hypothesizes that the presence of confabulatory responses after the age of seven is suggestive of "immaturity, if not pathology which they would imply at later ages." [1]

The outstanding feature of confabulatory concept-formation is the fact that a child at the age of four is perfectly satisfied with picking up one aspect of the stimulus material, for instance its color. He then presents a concept of definite shape, relating it to the total blot material on the card without any concern whether the form characteristics of the concept as a whole, or any major specifications, fit the blot material in any conceivable way. Calling all of Card II or III an "apple" or "cherries" because of the red spots, is an illustration. More frequently, the child may choose any of his favorite animals, point out one of its properties, like a "head of a cat" in Card VI or "ears of a rabbit" in Card V, and gleefully assign the

rest of the blot material to the same concept. He merely *points* vaguely all over the card when the cruel examiner tries to pin him down as to the parts of the animals.

Confabulatory Combinations

The next step in the development of concept formation is reached when the child becomes interested in identifying more than one element of his concept with various blot areas in a given card. The concept formation falls short in the way in which the specified elements are organized within a total concept. Not infrequently, the same blot areas may be used in a completely incompatible organization. A child may point out, for example, the white spots in Card I as "eyes and mouth" of the face of an animal whose whole body is located in the same central area of the card. Very often, purely positional specifications are added by designating any area at the bottom of the card "legs" or "tail" and any area in the top center "head." This is done, of course, regardless of the form characteristics of these areas and of whether or not they lend themselves to such specifications. Even the center red area in Card III may serve as the body of some creature whose ears are located in the outer red spots, while the black portions are arbitrarily assigned to serve as legs and head.

These confabulatory combinations occur routinely in the records of children between four and five years of age. The five-year-old child is normally expected to use confabulation and confabulatory combinations for at least half of his responses. The other half of his responses follow the pattern used for establishing minimum form-level requirements for the adult record. If a seven-year-old child still gives responses based on any of the three steps of perseveration, confabulation, and confabulatory combination, we may assume that he functions below his age level. The reason for this may lie in mental retardation, emotional infantilism, or a temporary emotional disturbance.

Concept Formations Below Minimum Adult Standards That Do Not Follow an Age Pattern

The three types of concept formation just described (magic-wand perseveration, confabulation, confabulatory combinations) are the only ones that can be genuinely described as infantile. There are two grounds for thus describing them:

1. They appear, as shown in longitudinal studies and age group comparisons, in regular sequence during the preschool age.
2. If they are found beyond their usual age range, they are accompanied clinically by indications of relative "infantilism" in the behavior of children producing these records.

There are a number of other concept formations that are not up to the minimum adult standard, but they do not occur in any regular sequence and are not specific for children's records.

One of these deviant concept-formations was called "fabulation" by Rorschach. It is superior to confabulatory combinations in that there is a fully acceptable combination of specifications and organization. That is, there is an appropriate relationship between the blot areas used and the form-characteristics of the concept. Their only distinction from ordinary superior responses is the fact that combinations like "a snake with whiskers and wings" are only acceptable on the fantasy level, not on the realistic level. Superior preschool children, and superior adults with a love for poetic license, are equally inclined to "fabulate." (See Chapter 10, pages 282-285.)

Another deviant concept formation has a more sinister meaning. It was named by Rorschach "contamination," and fulfills the following conditions of concept formation:

1. Two associations are connected with two different determinants of the same blot area (for example: the association "grass" with the color and the association "bear" with the shape of the green area in Card IX).
2. These two ideas are "contaminated" in a way that is not only unrealistic, like a fabulation, but outright nonsensical (for example, the concept "grass bear").

3. The subject is entirely unaware of the nonsensical character of the combination and especially does not think it humorous. Rorschach originally thought that this type of concept formation was pathognomic for schizophrenics.

Where it is found in children, in the experience of the writers, a marked schizoid quality of the subjects producing such records can always be established. Fortunately, follow-up studies in a number of cases have demonstrated that this schizoid condition in children does not necessarily lead to an adult schizophrenia.

We may mention briefly the slight terminological confusion that has led to a seeming conflict between the data published by Ames *et al* [1] and our own data. Ames and her co-workers write about two types of contamination, one of which occurs rather regularly among children between three and six, while the other occurs only rarely and does not show any age pattern. An investigation of the sample responses published seems to indicate that the common form of contamination corresponds to the responses described here as confabulatory combination [1, page 179]. Contamination, as used by the present authors, corresponds to the more rare and pathological form described by Ames *et al* as "full contamination."

Case Studies

This section illustrates the phenomenological approach to the interpretation of children's records. It will be seen that the general method is the same as that applied to adult records, with the important difference that the inferences drawn from the phenomenological analysis are based on the age of the child and what is known about age patterns. The interpretations are not meant as examples of comprehensive case studies but, rather, are illustrative of a method.

Case I

The subject is a five-year-old son of a military career man. The child's mother brought him to a child guidance clinic with the complaint that he refused to hear "what he doesn't want to hear." She also stated that he cried continually.

Six months before this consultation a myringotomy was performed because of a temporary slight hearing loss. The treatment was physically successful, but the "deafness" continued—at least at times when this seemed to be convenient for the boy.

The diagnostic test battery included, in addition to the Rorschach, the Stanford-Binet Form L, the House-Tree-Person, and the Despert Fables. His test behavior is described as follows: "The patient is a handsome, well-developed child, who showed a good degree of co-operation and a well-developed sense of social poise. His attention-span was quite adequate, although he did show signs of being tired after the second hour."

Some of the salient points from the interpretation of the tests other than the Rorschach are the following: He achieved a mental age of 5.8 and an IQ of 111. All of his intellectual skills are at least at the five-year level, but he is not able to do any task expected of a seven-year old. He shows some precocious perceptual-motor development. In his drawings he shows a good balance between fantasy and reality-living and a rich capacity for joyful experience. His response to the Despert Fables shows a normal conflict between dependency and independence and some open hostility to the mother.

His Rorschach responses were brief and to the point. No elaborate inquiry was attempted.

CARD I

Sky. (W)

CARD II

Felt—torn-up pants—Tee-shirt. (W) (Tee-shirt with red design on it was top red; pants, the rest.)

CARD III

Dogs—broken up. (Without the red spots.)

CARD IV

Two shoes stuck on together—one head, one eye, one nose. (*W*, nose is in top center shading, shoes in usual lower *D*'s.)

CARD V

A silly butterfly. No head, just feet. (*W*, feet are top and bottom; in inquiry he saw the butterfly flying.)

CARD VI

Bump-titty-bumptitty-bump-bump. (Asked in the inquiry what "Bump" etc., was, he repeated his original formulation energetically and smilingly, without further specification.)

CARD VII

A home and it looks like the clouds to me, up here. (*W*, usual *d* for house, rest clouds.)

CARD VIII

A tree (top *D*) and jumping-jack (side *D*, referring to an imaginary animal).

CARD IX

A tree. (*W*, card was not turned, but concept was seen upside down.)

CARD X

Smoke (all pink, seen as colored smoke), bugs (top grey), broken tree (top *D*), blasted sky (outer blue), blasted yellow (all the yellow), pants dangling, with head and ears and an animal tried to walk with it (lower, center green; in inquiry he explained that the animal tried to wear a costume).

Rorschach Interpretation

In the realistic case situation, it would be quite artificial, if not senseless, to interpret this record independently of the fact that it was produced by a five-year-old child. However, for the theoretical reasons discussed previously we will make such an attempt.

The mental approach to the stimulus material shows a transition from a rather careless use of the total blot material in each card to a consideration of the most obvious details, either as parts of a loosely-joined total concept or, where particularly facilitated by the stimulus material, as separate concepts.

The form level of the responses shows that he is just beginning to approach the minimal standards (1.00). In Card I he avoids

slipping below the standard through the use of an indefinite concept. In Card II he would reach minimal standards but slips slightly below because of careless organization. In Card III he reaches a form level of 1.00 but adds an irrelevant specification. In Card IV he manages a form level of 1.5 but almost spoils his efforts in his attempt to build up a *W*. In Card V he actually spoils the usual concept through a weakening specification. In Card VI he returns to the safety of a semi-definite response and enjoys his dodge quite comfortably. Card VII, again, reaches a form level of 1.5. The two responses in Card VIII just fulfill the minimum requirements. So does his response to Card IX. In Card X he definitely gives up this *W*-tendency, and shows a greater variety of intellectual achievement. Three of his responses, determined mostly by color, remain semi-definite (smoke, sky, and "blasted yellow"). Two more just fulfill the minimum requirements (bugs and tree). Finally, in the very last response, he shows his capacity to create a combinational response even though he uses rather fabulatory means to accomplish his ends. A further indication of potential superior capacities is his clever use of the *m* element for his "blasted" responses.

Another aspect of his thought processes, not covered by his approach to location and his form level, is his sturdy reality-contact. The latter permits him to use, in every single card, some of the most obvious aspects of the stimulus material. The beginnings of the capacity to shift from one kind of determinant to another make a further positive contribution to the impression of the richness of his thought processes.

An attempt to go beyond this stage of the phenomenological analysis and to describe the thought processes in behavioral terms, pretending not to know that these are the productions of a five-year-old child, would obviously be senseless. What else could we say, for example, about the "Bump-titty-bump" other than that this is a clever device of a five-year-old child to handle the phallic provocation of this card? This and other infantile elements clearly lack any flavor of bizarreness and thus could not be considered psychotic productions. On the other hand, a non-psychotic adult would have to be reduced, by alcoholic intoxication or other devices, to a con-

siderable degree of regression in order to indulge in the delightful fabulations which the five-year old can easily afford without such devious means. We therefore will proceed to fit the intellectual picture deduced from the record into the expected age pattern.

As pointed out in the preceding section, we grant a five-year-old child the right to use confabulatory combination in half of his responses, at the most. Our subject certainly does not transgress this privilege; in fact, outright confabulatory combination responses are conspicuous by their absence, and a tendency towards such concept formulations appears in only two of his responses (Cards II and V). Another expectation, based on age patterns, is that a five-year-old should use, in every response, at least some element that clearly relates the concept to the card. Here, our subject passes with flying colors.

In regard to the use of determinants, we expect a five-year-old to show some transition from the *FC* to the pure *C* and *CF* approach. We do not yet expect any shift from *FM* to *M* or any verbalized interest in shading. On all of these counts, our subject demonstrates that his emotional development is beyond the level we can expect at the age of five.

His use of color, however, just fits into his age pattern, because the "tee-shirt" in Card II still shows traces of the *FC*—approach. After that, he either does not use the colored spots, or he manages to avoid major discrepancies between the form of the blot and the form of the concept. In his use of movement elements (even including a tendency to *M* in his very last response) he clearly shows the relative maturity and self-sufficiency he demonstrated in his remarkable poise in the testing situation (in contrast to the crying his mother complains of).

The Oedipal conflict is mostly inferred from the case history and the remaining test material but can also be taken for granted as part of his actual life situation (his father had recently gone overseas). In the light of these supporting clues, we may interpret the content of his responses to Cards IV, VI, and VII as picturing a frustrated attempt to take his father's place. The mother, instead of accepting and deflecting his "phallic attack," seems to have been

threatened by it. She retaliates by demanding more independence and giving less support (smoke around the house in Card VII).

We can conclude that the disturbance that brought the mother to the child guidance clinic is merely a situational reaction to the recent physical disorder and the normal conflict-situation at home. The subject appears to be a well-developed youngster who does not need therapy for himself. Actually the only recommendation made was for some case work with the mother.

Case 2

The subject is an eight-year-old daughter of an American gas station attendant and a European mother of German extraction. The child was born in Europe, shortly after the liberation, two years before the parents were able to marry legally. They came to this country about a year after their marriage. The mother had considerable acculturation difficulties. She was separated from her child, at the time the child was five years old, for several months, while she underwent chest surgery. The reason for referral was concern of the parents about a series of overt sexual acts, including (according to a neighbor's report) fellatio with boys of her own age. These acts seem to have started when she was four years old and to have increased during the period immediately preceding the parents' coming to the child guidance clinic.

The diagnostic test battery included, in addition to the Rorschach, the Wechsler Intelligence Scale for Children, the House-Tree-Person, the Make a Picture Story, and the Blacky.

Her test behavior is described as follows: "This young patient is an attractive little girl who related quite warmly to the examiner, after some initial shyness. It was obvious that she has been strongly indoctrinated by the mother and probably punished severely for her sexual transgressions, since she showed much embarrassment in discussing these acts and said it was just bad. She appeared very bright and alert, was able to do most of the tasks without apparent fatigue, and seemed to enjoy herself."

Some of the salient points from the interpretation of the tests other than the Rorschach are as follows:

Her Verbal IQ is 96, her Performance IQ 99, and the Full-Scale IQ is 97. The sub-tests revealed that this IQ score is lower than her actual ability. The superior Picture Arrangement score is indicative of her good social awareness. The patient's drawings are fairly well executed and show good proportion. When asked to draw a house, she says "This is going to be a church." The drawing of the tree is extremely phallic. A thick brown trunk is given an appendage done in bright green, which, as she herself observes, looks "like an ice-cream cone." She draws a girl first and says, "Men are hard to do." Her MAPS stories are overpopulated, averaging six or seven figures per card. Most of the stories indicate family confusion. Spotting the nude figures, she says, "I don't want those" and turns them over. Mother figures, throughout the stories, are seen as "mean and cruel." The father, on the other hand, is seen as seductive. The man taking off his shirt is selected more frequently than any other figure. She expresses much guilt in her stories. The primary element revealed in the Blacky Pictures is lack of love from the mother. On the Oedipal card she says: "I know what, Mommy and Poppa are kind of smoochin' and Blacky is watchin' and getting mad because he doesn't get any huggin'." The primary impression from the Blacky is that the child is very precocious sexually but that this is primarily a means of demonstrating to herself that she is capable of getting love, even more capable than her mother. During the Rorschach testing (after the inquiry to Card III) she spontaneously reported a dream in which mother had jewels and the child took them and put them on, went out on a date, and was 19 years old.

The following is the Rorschach record:

CARD I

PERFORMANCE

2"

I don't know what that looks like. I can't figure it out. Hm . . . I can't do it. Well . . .

25"

1. Looks like two bears to me. Can't figure it out yet here.

INQUIRY

1. Here. (Q) Head, right here, arms, body, feet. (Q) Bears, look like it.

2. Looks like a woman or a little girl without any head. Got feet right here.
2. Head; here's her feet, real clear. (Q) Her dress. (Q) That's all I see. (Q) I don't know, gee. You know, her feet are down and her hands are reaching up.

CARD II

PERFORMANCE

2"

1. I think that's a cat, 'cause I've seen cats before. We have one next door. That I know.
1. Here's two eyes, nose, and here's his tongue sticking out of his mouth, splattering. (Q) I don't know. That's another part of her. (Limits, later on color): Could be whiskers, but not color. (Q) Not right.

CARD III

PERFORMANCE

Golly! 10"

1. I think that these are two men, right here. Don't know what this other part is. Kind of hard to do.
1. Here and here. A leg, other leg. Here's their chest; head and arms right here. (Q) I think they got jewelry in there and they're trying to steal it. (Tells dream mentioned earlier.)
2. These look like two women to me, right here. The rest I don't know.
2. They look like women. (Q) Head, legs, dress. (Q) They are acrobats or something, I think. Going up and over . . . a somersault. Maybe the men and these are doing a trick on that thing . . . what you call it. Jump on it and play.

CARD IV

PERFORMANCE

(Stares intently) 2"

1. Man sitting on a stool or something. Never did this before. Don't know what it is all about.
1. Here's the man sitting; legs, his back. Looks like he's carrying two geese he shot, sitting on this stool. Here's the back of his head. Maybe he's wearing a jungle hat. (Q) The shape of it like that. (Later, Limits on shading): Nope, not right. (Why?) Don't know.

INQUIRY

INQUIRY

INQUIRY

CARD V

PERFORMANCE

1"

1. That's some kind of bird.

INQUIRY

1. His wings. These are part of them, stretched out, he's stretching them. Here's his feet. He's big.

CARD VI

PERFORMANCE

Hm . . . 12"

1. I don't know what this is. Looks like a cat . . . or a seal, either one.
2. Part of it looks like a snake and he's breaking here and pushing here and this is a rock and he breaks it to pieces. I hate snakes, especially the ones that bite. I sometimes dream about them too. Awful!

INQUIRY

1. I think it is a cat, because of the whiskers. (Q) Just the way he looks.
2. This here looks like a snake. Don't know . . . Looks like one of the snakes made out of steel that kill people. That's how come you can break rocks like Superman. (Q) Just looks like a big rock. (Q) Hard rocks. (Q) I don't know.

CARD VII

PERFORMANCE

5"

1. Looks like two little dwarfs or dogs, jumping on this rock. No one would have a tail like that. Anyway, I don't.

INQUIRY

1. Two dwarfs, no, dogs. Here's ear, eye. Nose, tail. (Q) Dogs, not dwarfs, cocker spaniels. (Q) 'Cause cocker spaniel's tail is little. (Q) Furry. (Q) This, here.

CARD VIII

PERFORMANCE

(Q) Is that upside down? Now I know. 15"

1. I think that these are two bulls, or somep'n, trying to climb up a mountain and they're steppin' on rocks, and both got their hoofs on something. Their hoofs are sticking in that stuff.

INQUIRY

1. One of these here. Climbing up. No horns though, I guess. Their hoofs are caught in the mud, makes it stick. (Q) Just the way it is, like that.

CARD IX

PERFORMANCE

What's that! Oh, no! That's a hard one! 15"

1. Looks like somethin' on fire. Could be.
2. This here is a little bear and he's sleepin'. Doesn't know the tree's on fire.

INQUIRY

1. Right here. (Q) Trees on fire, the color of it, and the fire here, burning.
2. Could be a baby bear, 'cause he's little. The fire is all around him.

CARD X

PERFORMANCE

What's that! 5"

1. I think this is a mouse, right here. Couldn't be yellow mouses. Could be some cats lookin' for the mouse.
2. Or a bird, looks like a bird.
3. What in the world is that? Somep'n is coming out . . . no, looks like a spine.
4. A . . . mask and the eyes fell off, made out of paper.
5. These are the cats' house.
6. That looks like an octopus.

INQUIRY

1. Right here, two of 'em. (Q) Mouse is trying to get away from the bird and he's trying to go in there and the cats are there and they don't know it. Maybe.
2. The cat is better than a bird, and it is . . . no, better, a horse. A flying horse, I love horses.
3. Just here. No, that is separate from the others, I guess.
4. Here; the eyes are falling down into down here.
5. Where they go in. The shape of it.
6. Just here, an octopus.

Testing the Limits

(Color?) : This bear, color of him, and like I said, the tree and the fire. And the horse, too. (Q) Yes, it was before, didn't I say?

(Other?) No.

(Skin on VI?) : Yes, it could be, it's furry, some kind of an animal and this could be a mouse up here.

(IV also?) : Yes, it could be.

(What could this be? lower *d* in VII) : I don't know what, could be a stick between the rocks.

Quantitative Summary

M = 3	H = 4	W% = 47%
FM = 10	A = 11	D% = 47%
m = 1 plus 2	Ad = 2	dd% = 5%
F = 4	Obj = 1	
Fc = 0 plus 1	Fire = 1	
CF = 1 plus 2		

R = 19	M : Sum C = 3:1	
ARA = 9'	(FM + m) : (c + C) = 11:0	
ARC = 9'	(VIII, IX, X)% = 47%	X% = 32%
F% = 21%	W : M = 9:3	
A% = 68%		
P = 3		
Orig = 5 plus 3		

Rorschach Interpretation: Quantitative Analysis

Out of 19 responses, fourteen are based on main determinants in the movement area. Both the present form of adjustment and, even more so, the visible trend of future development are highly introversial. This is the more remarkable since the subject is just past her eighth birthday. We would expect merely the first emergence of movement responses at this age. Naturally, the more naive personification of drive impulses (*FM*) outweighs the more sophisticated utilization of imaginative resources (*M*). The fact that 47 per cent of all responses are given to the last three cards shows that she has considerable unused extraversial resources. It also suggests, at least in part, that the present introversial trend may be a situational reaction.

The only other quantitative imbalance is the contrast between the high *A*%, on the one hand, and the low *F*% on the other. A simple explanation for this unusual combination is her age. But this explanation is not sufficient, because the usual connotation to a high *A*% (namely, narrowness of interests and tendency to stereotypy) would be extremely misleading. The great majority of her fourteen

animals are engaged in rather intriguing activities. The snake in Card VI, for example, breaks a rock to pieces.

Beyond the two remarks just made, there is nothing that could be added from the point of view of age patterns. She has just left the age limit where we grant children the use of infantile patterns of concept formation and she does not use them.

Sequence Analysis

CARD I

After a somewhat hesitant beginning, she proceeds quite competently in organizing the card into the two side portions and the central area. Both are associated with obvious concepts and are very carefully and clearly specified. This would indicate that her intellectual capacities are considerably above the performance shown in the intelligence test. The unstructured task situation seems to make it possible for her to draw more freely on her intellectual resources.

CARD II

In Card II she uses a more appropriate concept for her age. This organization of the material into the face of a cat is an almost popular response up to her age level. Again, her specifications fortify the concept more than one usually sees in children. In strange contrast to her seeming "acting-out" behavior in real life, she acts almost circumspect in avoiding the use of color in this card. The "splattering tongue" is the only symbolic indication of a disturbance.

CARD III

The last remark to Card III shows that this avoidance of color is certainly not due to a lack of interest in it. In fact, she is quite worried in this card because she does not know what to do with the red spots. The fact that she has no trouble seeing the usual figures in the usual way as men indicates that she does not hesitate to accept the culturally prevailing attitude to masculine and feminine roles. The fact that she associates her interesting dream, at this very moment, substantiates further the "innocence" in her "crime." The jewels, which the men are trying to steal, suggest that her "sex ap-

peal" was, to her, a thing of great value. The feeling of guilt, associated with her behavior, must have been imposed by the reactions of her environment. In the second response, she finally manages to use the outer red spots, and is sufficiently stimulated to build up her most superior concept. The women are doing a performance to please the audience, and even the men are now participating in this constructive activity instead of trying to steal.

CARD IV

The combination of sensuality and masculine aggression usually associated with the stimulus material in this card worries her but does not stump her. She again organizes and specifies the material in a distinctly superior manner. Again she refuses (even in testing the limits) to admit the use of shading. She only accepts it in the very last phase of the procedure. The teaching of "badness" of sensuous pleasure may have had a very strong impact on her.

CARD V

The only interesting detail in the usual response to Card V is the freedom with which she elaborates the *FM* quality, indicating that she is temperamentally a very vivacious girl.

CARD VI

The complicated construction of this card puzzles her for a time, but in the second response she breaks through to her most original organizational effort. Her awareness of the potentially catastrophic (at her age) effects of phallic intrusion may help to explain how she discovered fellatio as a less dangerous compromise.

CARD VII

She uses this card in one of the more obvious ways but is extremely concerned about what to do with the "little tail" that sticks out so provocatively. "No one would have a tail like that," she says. Finally she finds the solution of cocker spaniels, who can enjoy their animal spirits without parental interference. The contrast between the soft furriness of the spaniels and the rocks on which they are jumping, together with the sticks she associates in testing the limits (to the area usually associated with softness of maternal affection)

might indicate that she has some awareness of her mother's difficulties in playing a feminine or maternal role.

CARD VIII

Again she organizes the material in one of the obvious ways, but she adds some interesting original specifications, like the mud in which the hoofs of the bulls are sticking. The fact that she is sorry that the bulls have no horns is a new verification that she has no objection against the natural distribution of sexual roles.

CARD IX

The baby bear sleeping with the fire all around him is an almost unbelievable symbolic condensation of her actual life situation. Without realizing what she was doing, she has set the whole family world on fire. This is her first free and intense use of color in the stimulus material.

CARD X

The assemblage of colorful material seems to confuse her for a time. She is less sure in picking up the most obvious connotations to the blot areas than she was in the other nine cards, but she straightens it out nicely during the inquiry. The phallic top detail of this card evokes an almost unbelievably naive reaction in her: "Something is coming out." She catches herself quickly, however, and covers up with a harmless anatomy response. In the inquiry, she still feels constrained to add that this is separate from the others. The eyes falling off the paper mask may reflect her feeling of being exposed. The cats' house, into which the eyes are falling, may symbolize the mother's house. This is the only somewhat-far-fetched response in the whole record, but it is certainly one that is within the normal range for an eight-year-old child. She finishes up with a popular response.

Summary

The thought processes of this eight-year-old girl show a healthy mixture of a down-to-earth practical intelligence with just enough vivaciousness and imagination to make her charming. The affective

picture shows a healthy capacity for strong and passionate responsiveness, for which she has not yet found appropriate social outlets even though she is searching for them (the flying horse on Card X, for which, in testing the limits, she uses the color too). In a way, it seems fortunate that the fire she started with her behavior brought her into the therapy situation. The acceptance and understanding of her "misbehavior" would pave the way for the development of the necessary social poise that would protect her strong feminine capacities.

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Rorschach Reactions and Child Therapy: A Case Study

In this chapter we shall illustrate the relationship between the Rorschach reactions of a child and the behavioral observations in therapy. The Rorschach analysis is meant to demonstrate the phenomenological approach. This approach elicits information as to the cognitive and affective processes, the ego structure, the defenses, the state of reality testing, and ego strength—all of which permit one to make diagnostic and prognostic inferences. Dynamics are also revealed by this approach, but it is only in the combination of the Rorschach record with full knowledge of case history material or psychotherapy information that content symbolism can be used meaningfully. It is our contention that without such auxiliary information, content interpretation becomes merely a "stunt performance," which may contribute some information about the interpreter but is not likely to provide really useful knowledge.

In our illustrative case, two Rorschach records were taken: one prior to the beginning of therapy and a second one ten months later, after 30 sessions of psychotherapy.*

The plan of the chapter is as follows: First, there is presented the case history material that was available to the Rorschach examiner at the time of testing. This is little more than an extended referral

* The Rorschach interpretations were done by Bruno Klopfer; the therapy was carried out by Marvin Spiegelman.

statement but is fairly typical of the kind of information generally given to the psychologist when evaluation is requested. In conjunction with this case history material, the test behavior of the patient is described and some salient points from the interpretation of the tests other than the Rorschach are given. The case history material, the test behavior, and the salient points from other tests constituted all the information available to the Rorschach analyst at the time of his interpretation.

Second, a brief summary of facts in regard to the therapy is presented. This material was not available to the Rorschach analyst at the time of his analysis.

Third, the first Rorschach protocol and Rorschach interpretation, card by card, are given. Following the interpretation of each card, relevant therapy observations are noted by the therapist. Again, this material from the therapist was not available to the Rorschach interpreter at the time of the analysis.

Fourth, the second Rorschach is presented; then the Rorschach analyst compares the two Rorschachs in the light of all the material, including the therapy observations, which has preceded it.

Case-History, Test Behavior, and Points from Other Tests

This is a 10½-year-old son in a family where the father has had to be away from home for periods of six months to a year at a time. The pregnant mother and the six-year-old sister are the remaining members of the family. This boy had, at a young age, an imaginary companion with whom he carried on long conversations. Even now, he wakes up at 4:30 A.M. and mumbles and plays by himself. Nevertheless, he gets along with his peers, but he has few close friends. He prefers quiet friends, has not been known to fight, but he displays a consuming interest in antique guns. He shies away from close personal contact with his mother. In school he gets good grades in mathematics, but outside of this his teachers feel that he does very poorly. Thus they have referred him for guidance. The mother

is also concerned about the patient's "life-long daydreaming," stomach aches, headaches, and temper tantrums.

The diagnostic battery consisted of the following tests, in addition to the Rorschach: Wechsler Intelligence Scale for Children, Bender Gestalt, House-Tree-Person, and Thematic Apperception Test. The test behavior is described as follows: "The patient is a handsome, most ingratiating and poised youngster whose ease of relating to the examiner was very good, reflecting a social maturity beyond his years. Though the examination took practically all day, he showed no signs of fatigue."

Some of the salient points of interpretation of the tests other than the Rorschach are as follows: Verbal IQ is 121, Performance IQ is 128 and Full-Scale IQ is 127. The only sub-test with a below-average weighted score is Digit-Span, indicating the presence of some anxiety. His highest sub-test score is achieved in Picture Arrangement, indicating a rich, intuitive social logic, which is in strange contrast to his external social life. The Bender Gestalt showed considerable difficulty in closing the contact-point between figures and general psychomotor clumsiness. (This corresponds to his early behavior in therapy where he needed to play football outside rather than participate in the playroom. He also was rather afraid of catching a ball thrown with any force.) In the House-Tree-Person test, he drew the inside plan of a house where "only me and my dog live; mommy and daddy would be in their own homes." However, he included a "library" and a "study" in the plan for his own house. In the Thematic Apperception Test stories, the mother is viewed as the dominant person in the family. He expresses open hostility to both parents.

Psychotherapy Summary

This is a slender, dark-complexioned lad who when first seen for treatment was 10 years old. He has been seen for 30 play-therapy interviews, which are now continuing, on a weekly basis. The boy's mother has been seen a somewhat fewer number of times, owing to pregnancy and the birth of a boy.

The first 15 interviews were regular, but the 16th interview was preceded by the therapist's absence for six weeks. This absence was anticipated several weeks in advance and discussed. The patient missed the scheduled 17th interview, but therapy meetings have been quite regular since then.

Presenting problems included poor school work, headaches, stomach aches, temper tantrums, withdrawal from family life and over-involvement in fantasy. The patient has related rather well throughout the therapy, except for some initial shyness during the first three interviews when he preferred to play football outside, rather than stay in the play-therapy room. Movement has been quite satisfactory—although there have been occasional relapses, attributable, in part, to the therapist's absence and to special stresses in the home, such as the birth of the new baby.

All symptoms, except poor school work, cleared by the 15th interview. The headache symptom recurred during the 27th session, but disappeared during the same session and has not been mentioned again. School work improved gradually at first, but dramatic change has been shown from the 21st session onward, after he had seemed to work through material related to sexual curiosity.

The major problem dealt with during the first 16 interviews was the expression of and coping with hostility. In the relatively free atmosphere of play therapy, the patient acted out a good deal of hostile fantasy content, directing it toward parents, siblings, peers, and the therapist. Acceptance of this hostility and some interpretation of it, aimed at catharsis and abreaction rather than toward achieving insight as to its causes, probably contributed to what improvement existed at that time. From the 17th session to the 26th, however, the content was primarily sexual, involving the patient's sexual curiosity, family conflict, and an apparently underlying castration anxiety. Since the 26th interview, there has been a reworking through of this material in terms of relationship to the therapist. Pace of therapy has slowed and the patient seems quite comfortable. The family reports no further difficulties, and the patient seems to be getting along very well.

Termination within a month or two is now being considered.

Psychological evaluation, by means of a second Rorschach, is awaited as a help in making the decision.

First Rorschach

The first Rorschach protocol is given below, followed by the quantitative analysis and sequence analysis.

First Rorschach: Protocol

CARD I

PERFORMANCE

2"

1. Looks like a bat.
2. Eagles on both sides. Can I turn it upside down even?
3. $\wedge \vee$ Now it looks like two eagles fighting.
4. $> @ > @ > \wedge \vee \wedge$ Looks like two fish on it too.
5. Looks like lady or a man's head—two of 'em.
6. Camel humps.

INQUIRY

1. A bat head; the shape of this and the mouth.
2. The face and the wings . . . it looks as if they're falling right down.
3. Looks like they are trying to put their wings around each other. Strong love in them.
4. Looks like the head of a fish.
5. (White space only) They look like little tiny top . . . little nose and big neck.
6. The two humps, they hump.

CARD II

PERFORMANCE

7"

1. Looks like two bears fighting or some kind of creatures.
2. It looks like scissors.
3. It makes you think of fish.

INQUIRY

1. Two bears fighting . . . looks like the bears have big necks with big heads. They're kicking each other—trying to hit each other with their paws.
2. When scissors connect . . . they are real hard to pull in . . . look like they are real hard to pull in.
3. Some fish are dark in some places . . . these fish remind me of black and white ones . . . only these are red, sort of an orange color.

PERFORMANCE (*continued*)

4. Looks like it has a . . . some kind of bird in the old days . . . back in the ice age.
5. Looks like a rabbit—two of 'em.
(Laughs)

INQUIRY (*continued*)

4. Stork . . . looks like a big stork flying . . . with no feet, head, body and bill.
5. Head, ears, don't show his eyes.
Add: Head of an outlaw . . . doesn't show the face; shows him like he's riding off in the distance.

CARD III

PERFORMANCE

5" Ha-Ha

1. It looks like two men at the bowling alley.
2. Butterfly.
3. $\wedge \vee$ A man falling through space.
4. Ladies' shoes.
5. A log.
6. Some man's vest . . . got ripped.
7. Two canes.

INQUIRY

1. Two men at the bowling alley are right here . . . just the way they look with their seat stuck out.
2. It looks like a butterfly when it's just getting his full wings . . . little butterfly . . . just the shape.
3. Two men falling through space . . . they look like they are real long-legged and short body . . . look like they are alive but they'll soon be dead . . . see, here is the pavement.
4. (Bottom *d* of regular leg)
5. Log—regular log—the shape.
6. Vest . . . poor guy shot it up, was out here. Looks like it's plastic . . . he just shot it with a shotgun and there wasn't anything left . . . mostly color there.
7. Canes (*T* of *D*). The color and my imagination.
Add: Lady's girdle (center *d*).

CARD IV

PERFORMANCE

8" Hm boy!

1. A clown in a circus.

INQUIRY

1. Clown covers this whole area . . . it's a midget clown . . . he looks like he's bow-legged . . . with a long tail or a little tail which is real wide . . . looks like he's got his feet stuck way up and his toes stickin' up.

2. Raccoon's head.
3. Man's feet.
4. < Two tiny men's heads.
5. V Plant.

CARD V

PERFORMANCE

3"

1. Bat.
2. V Person.
3. Dull-edged scissors.
4. Pair of alligator heads.
5. Pair of sheep heads.
6. Eagle's mouth.
7. Duck's mouth.
8. > V Two cannons.
9. < ^ A rifle.

CARD VI

PERFORMANCE

7" Ugh-ooh!

1. Dead cat.
2. Two hands tied together.
3. V Two hooks sticking out.
4. Wings.
5. Whiskers.

2. Raccoon head . . . looks like a raccoon when it's prowling around at night; from the top . . . looks just like its fur there.
3. Shoes . . . look like big shoes.
4. Faces . . . looks like they are looking up at the moon or the sun—looks like he has no mouth and the other looks like he has a mouth a mile big.
5. Looks like a cactus.

INQUIRY

1. Baseball bat.
 2. Person; man with a giant nose; looks like he's got wrinkles in his forehead; looks like he's got a long nose—hair stickin' way out, tiny eyes—mostly shape.
 3. Surgical scissors.
 4. Alligator head . . . looks like just the bones of the alligator with his mouth open.
 5. Sheep head—looks like a black sheep's head.
 6. Eagle's beak.
 7. Duck's head.
 8. Same place the nose was.
 9. Little tiny rifle.
- Add: Fish head.

INQUIRY

1. (W) . . . it's flattened out . . . looks like a cat that's been belly-gutted . . . looks like one and smells like one . . . from the furry side.
2. Two hands tied together . . . real close together.
3. Two hooks.
4. Wings, also looks like a pig too, just the head.
5. Whiskers.

PERFORMANCE (*continued*)

6. Mountains.
7. Two birds.
8. A bee.
9. Two rats.
10. Pair of duck heads.
11. Two fish.
12. Can opener.

CARD VII

PERFORMANCE

10" Hey!

1. Two dogs.
2. Two rabbits.
3. Two donkeys.
4. Two diving boards.
5. Two turtles.
6. Two balanced rocks.
7. Two bear heads.
8. V Two pig heads.
9. A bat.

CARD VIII

PERFORMANCE

8" Oh!

1. Two bears.

INQUIRY (*continued*)

6. Mountains.
7. Looks like they're woodpeckers . . . the way the woodpeckers . . . after they have been pecking for a while . . . they sit back.
8. Looks like the hind end of a bee where the honey goes up.
9. Looks like rats with a big face . . . looks like they're pack rats.
10. Just the tip . . . it might not look like duck heads to you, but they do to me.
11. Looks like a fish just sticking out his head.
12. Bottle openers.
Add: Bug.

INQUIRY

1. Two dogs . . . little dogs with huge ears . . . as if they were scared.
2. Same place the dog was . . . looks like rabbits when you're gonna feed 'em . . . when they hear you comin' . . . O'boy . . . their ears are straight up.
3. Really climbing up.
4. Diving board . . . dog's, cat's or rabbit's tail . . . shape of it.
5. Turtle . . . I've got a good imagination.
6. Looks like they're balancing on these rocks.
7. Bear heads.
8. Pigs . . . looks like a head.
9. Just the shape.
Add: Building . . . ancient huge round thing on top . . . grand vizier.
Add: Cat. (Same as 7 and 2)

INQUIRY

1. Two bears . . . looks like they're climbing up mountains.

- | | |
|-----------------------------------|--|
| 2. Fish. | 2. Fish . . . reminds me of a fish without his head. |
| 3. Guided missile. | 3. Guided missile . . . looks like it's going very very straight up. |
| 4. Dagger. | 4. Dagger. |
| 5. V Rat—two rats. | 5. Big ones aren't they. Looks like rats climbing over dirt and things—difference in color and shading there. |
| 6. > Two planes. | 6. Airplanes don't have such wings. |
| 7. ^ Skeleton bones. | 7. Skeleton bones. |
| 8. V Man's body without any skin. | 8. Looks like it's all blubber and muscle . . . looks like it's really there . . . muscle appears to be red and blubber is all different colors. |
| 9. Roman soldier. | 9. Roman soldier's head. |
| 10. Dinosaur. | 10. Dinosaur . . . looks like it's the bones of a dinosaur head. |

CARD IX

PERFORMANCE

7"

- Two witches.
- Two fat men runnin' after a witch.
- A ray gun.
- Bones—skeleton bones.
- Malenkov.
- Stalin.
- Two eyes lookin' out of nowhere.
- Two mooses' heads.
- > A little fat butcher.
- Alligator.
- Man with a tail on him.

INQUIRY

- The witches . . . orange parts . . . they make it look like it's Halloween night . . . looks like they're flying in the breeze . . . it's colored orange.
- The fat little butcher . . . men with knives running after the witches . . . looks like one of 'em got a knife in his hand.
- Ray gun . . . a handle and barrel.
- Skeleton bones.
- Malenkov . . . his mustache and the face.
- Other side . . . he had a little mustache.
- Eyes. (Center S)
- Moose head . . . a good deal of the shading there.
- Chopping up meat . . . looks like he only has one tooth.
- Alligator . . . looks like he swam all along the water.
- Man with tail . . . looks like a man that has a tail sticking out . . . looks like he's running around yelling, "Help, help got a tail!"

PERFORMANCE (*continued*)

12. Dunce hat.
13. Blue sky above.

INQUIRY (*continued*)

12. Dunce hat.
13. It has blue and a little white spot—just like it is outside today.

CARD X

PERFORMANCE

6" Oh, this will be easy if I can name off the things.

1. Freak from Mars.
2. Wishbone.
3. Two boys kneeling down to say their prayers.
4. Two cardinals.
5. Two spiders.
6. Two elephants doing a dance.
7. Woman's girdle. (Laughs)
8. Boy's tooth.
9. Two spiders fighting a sea horse.
10. Two fish coming to help the sea horse fight the spider.
11. Two three-legged men.
12. ^ A boat.
13. ^ A house.
14. ^ Plane.
15. ^ Pipe.

INQUIRY

1. Freak from Mars . . . looks like he has just legs, a head, nothing else, and he looks like he's dead.
2. Wishbone.
3. Two little boys saying their prayers . . . little arms and hands cover up mouth.
4. I don't know why it made me think of cardinals—it just did—the color on it.
5. Spiders . . . legs stickin' out.
6. Two elephants dancing . . . looks like perched on their front feet—back two feet.
7. Girdle, lady's girdle, only turned the other way.
8. Tooth—front tooth.
9. Spider fighting a seahorse.
10. Fish coming to help him and the color is green because rainbow trout has green in it.
11. Right by the pipe . . . looks like they're snapping at each other . . . looks like they're coming off the rocks to fight each other.
12. Boat . . . looks like one of these boat houses.
13. House.
14. Plane . . . looks like one of these fuel planes . . . that comes out and loads up others . . . looks like it's up in the air.
15. A sink pipe.

First Rorschach: Quantitative Data

$$M = 11+2$$

$$FM = 15+1$$

$$m = 6+1$$

$$FK = 0+2$$

$$F = 50+2$$

$$Fc = 3$$

$$cF = 0+2$$

$$FC' = 1$$

$$FC = 3+4$$

$$CF = 1$$

$$C = 1$$

$$H = 11+1$$

$$Hd = 7$$

$$A = 29+2$$

$$Ad = 10$$

$$At = 5$$

$$Obj = 22$$

$$Clo = 2+1$$

$$Geo = 2$$

$$Aobj = 1$$

$$Pl = 1$$

$$Sky = 1$$

$$R = 91$$

$$RT\ I, IV, V, VI, VII = 6''$$

$$RT\ II, III, VIII, IX, X = 7''$$

$$F = 55\%$$

$$\bar{R} = 55\%$$

$$\frac{F+FK+Fc}{R} = 58\%$$

$$\frac{A+Ad}{R} = 43A\%$$

$$P = 6$$

$$O = 10+3$$

$$O- = 7$$

$$(H+A) : (Hd+Ad) = 40:15$$

$$M : \text{Sum } C = 11:4$$

$$(VIII, IX, X) \% = 42\%$$

$$W : M = 3:11$$

$$\text{Succession} = \text{Orderly} \rightarrow \text{loose}$$

$$W = 3\%$$

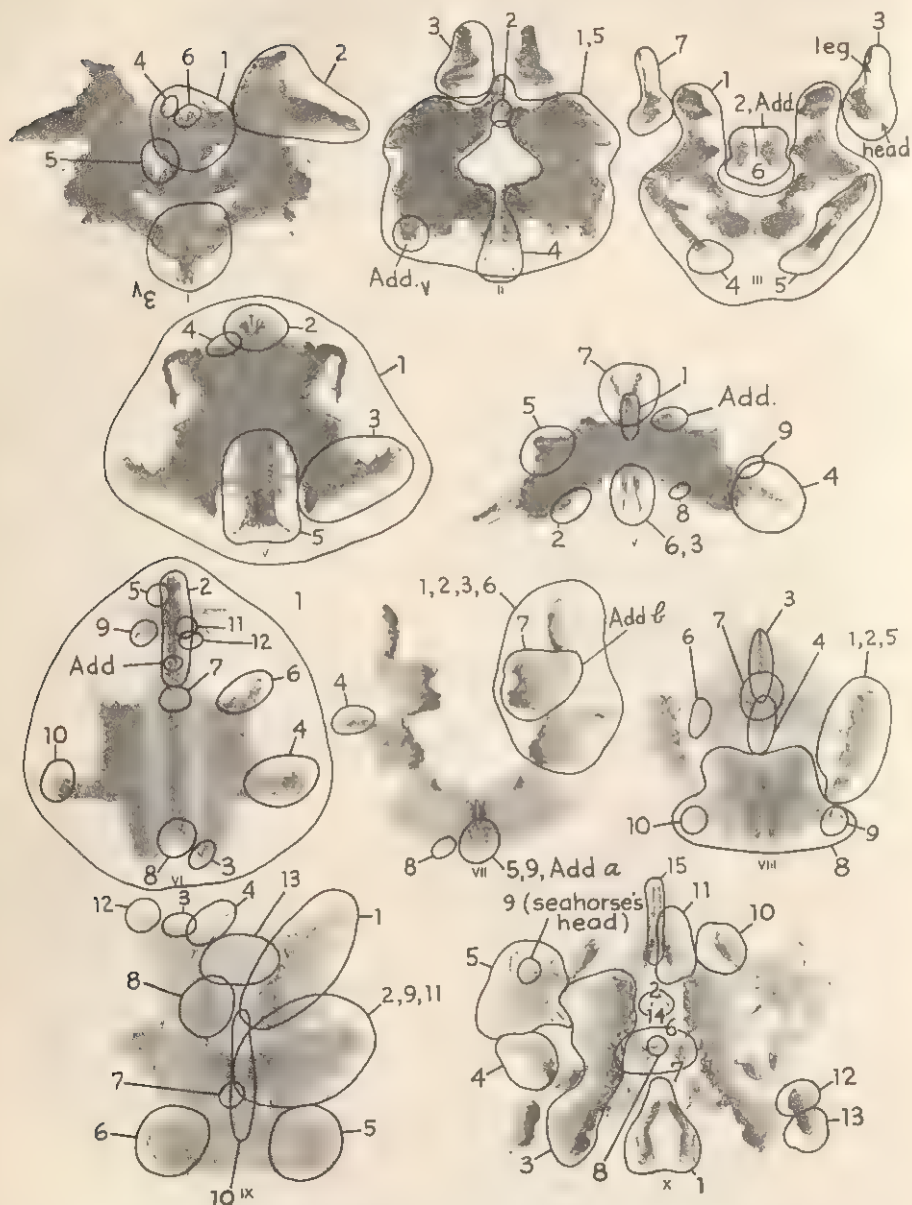
$$D = 51\%$$

$$d = 19\%$$

$$Dd \left\{ \begin{array}{l} dd = 23\% \\ ds = 2\% \\ Dds = 1\% \end{array} \right\} 26\%$$

First Rorschach: Interpretation—Quantitative Analysis

The quantitative picture reveals four outstanding imbalances: an $F\%$ of 55, an extreme scarcity of shock-absorbing factors, an intro-versial balance of almost 3 to 1, and a marked tendency away from



FIRST RORSCHACH Location Chart, reproduced from Individual Record Blank (copyright by The Rorschach Institute, Inc., published by World Book Company).

W's to smaller and smaller details. The modifying factors are an adequate percentage of usual details, and the fact that 42 per cent of his responses fall in the last three cards. Considering the mental age of the subject in contrast to his chronological age, he may have reached the introversial crisis of puberty, which usually occurs around 14 years of age. (Several investigators have found the maximum of *M* production at 14 years.) Most characteristic for this boy seems the proportion of *W* : *M*, which is 3:11. One could hardly think of a better illustration for his difficulty in using his rich inner resources in terms of any accomplishment. A complete reversal of this proportion would be closer to a favorable balance. The shading and color pattern show the extreme lack of development of his extraversional resources. To make this side of the picture still more unfavorable, he was able, in his 91 responses, to combine form-color only three times in the performance proper, and then usually reluctantly. In regard to shading, the sequence analysis will have to investigate whether the scarcity of scorable shading responses is due to an extreme reluctance or to a lowering of responsiveness to shading.

Therapy Observations

That the patient is highly introversive is certainly borne out by the impressions gleaned in therapy. Despite his capacity for warm relationship (which was shown later in therapy) he was quite shy at first and much preferred to play ball outside, maintaining his distance, than to go to the play room. After three sessions of football, however, he chose to remain in the play-therapy room and from then on produced a great wealth of fantasy material. The inference that the patient reached the pre-puberty crisis is also supported by the impressions from the therapy, but the events indicating this occurred only several months after the testing. From about the 15th session on, the mother of the patient reported that he began to take a new interest in clothes and in his general appearance. He even saved the money he had earned from odd jobs to buy a particularly important leather jacket, since this was beyond the financial ability of the parents. The jacket was of a type worn primarily by adolescents. A few

months after this, the patient made his first shy attempts to relate to girls. Initially, this involved participation in kissing games. He first liked to kiss the girls but did not wish them to kiss him, since he felt that he had to be the aggressive one. Later, he had his own special girl-friend and showed all the usual accompaniments of the first adolescent love. It should be noted that the mother's reactions to his first signs of puberty were some anxiety and a desire to have him remain a little boy. She was, with the social worker's help, able to accept the boy's growing up; but she did not achieve insight into the counter-Oedipal feelings which contributed to her desire to keep him as a little boy.

The *W* : *M* ratio, as suggested in the analysis, does indeed characterize the boy's "drive for non-achievement." Despite an excellent intellect and unquestioned ability, the last symptom to disappear in the course of therapy was his poor school work. At first his grades were all C or below, with the exception of arithmetic where he usually got B's. His father had done well in all areas except arithmetic when he went to school, but the mother's brothers had been exceptionally good in the latter subject. The patient read a good deal on his own, but never did well in reading at school. The reason for this "non-achievement" will be discussed below.

First Rorschach: Sequence Analysis

CARD I

The sequence of the six responses to Card I nicely illustrates the trends observed in the quantitative analysis. The blot areas used shrink in size throughout the process of responding.

This shrinking process leads to a subtle problem of differential diagnosis in the very first response. The subject gives the usual response, bat, but indicates in the inquiry that he only used the top center detail. If the whole bat had been seen in this limited area, this would constitute a typical case of transposition (see Chapter 10). However, the subject specifies only the shape of the head and the mouth. To complete the picture, the examiner could have specifically asked about the body and wings of the bat. (Later the boy denied that the whole blot could be a bat, it "just didn't look like

it.") Nevertheless, we can be reassured that the subject avoided the use of the transposition mechanism. This constitutes a crucial differential diagnostic decision, since the extreme withdrawal tendency of the subject, both in his Rorschach reactions and in his daily behavior, raises the question whether this withdrawal is merely an introversial one (which avoids loosening of reality testing and maintains the full capacity for deep emotions) or a schizoid withdrawal (which loosens the tie to reality and produces the schizoid flattening of affect through dissociation of ego and drive impulses).

The two "eagle" responses, following the "bat," illustrate the imaginative flexibility of the subject's thinking, but indicate also his tendency to cling to ideas. Again, this could be misunderstood as a tendency to fixed-concept perseveration. However, the convincing superiority of his specifications should preclude such a misunderstanding.

The content symbolism of the "strong love" in the eagles who are trying to "put their wings around each other" seems to give a good illustration of the imaginative hothouse created by the puberty crisis.

The two small top-center details, frequently seen as the open mouths of some young birds, are seen by our subject as the heads of fishes. This may indicate that his dependent needs are pushed close to the unconscious (water)—an hypothesis that seems to be confirmed by the case history statements about the relationship with his mother.

When he sees, finally, the head of a human being, he uses the white space area. His human relations are where there is "nothing" in outer reality. Along the same lines of thinking, it might not be accidental that he sees the humps of a desert animal, where frequently a pair of female breasts is seen.

Therapy Observations (Card I)

The possibility of the presence of some schizoid elements was considered at the beginning of therapy, but only in connection with the symptoms of withdrawal and the report, by the mother, that the patient spent long hours engrossed in fantasy. When he tried to tell

her some of these stories, she could not understand him. The hypothesis of schizoid elements was soon abandoned. The patient had intense affect and was only under pressure to release some of it. He would become completely involved in a great variety of stories and would act out the various parts, complete with sound effects, in a very dramatic fashion. If one listened carefully, one could understand him quite well. His imaginative capacity and variety of expression were constant sources of amazement to the therapist. At no time was the possibility of a thinking disorder entertained. The only way that his "clinging to ideas" was shown was in the repetitive underlying themas with which he coped at various stages of treatment. During the first phase of therapy, for example, he was expressing a good deal of aggression. Again and again, he would set up a family situation, have criminals come to attack them, followed by police. General mass murder would follow and the hero, a young boy, would be the only one left alive. He would enclose the hero with a little furniture, but this would be outside the house. The patient would be completely alone, but contented. This theme was re-enacted over a period of seven interviews, but many other side-issues and variations were added.

During a later phase of therapy, the patient "perseverated" a story of "a typical American family" riding animals in far-off countries, being pursued by unfriendly natives (later in therapy being friendly with them) and then bedding down for the night with much concern about who was going to sleep where and with which animal.

The "imaginative hothouse" was amply shown throughout the therapy, not only by the variety and intensity of fantasy and affect, but also by the patient's strong but repressed sexual curiosity. A turning point in therapy was reached when he was able to examine the sexual characteristics of several dolls and discuss his understanding of what intercourse was. This led to a great outpouring of Oedipal material (to be discussed later) and was followed, almost immediately, by improving school work.

The patient certainly tended to deny his dependency needs, as the analysis suggests, but his relationship with his mother had other qualities as well. She stated, in her own therapy, that she had,

through the years, tended to pay less attention to her son than to her younger daughter. Her son had always been a bright, handsome boy, and she was afraid that she would favor him openly, thus depriving her younger daughter. Furthermore, at the time therapy began she was occupied with her pregnancy and this led to a further "dryness" in maternal love in her relationship to the patient. The resultant intensification in the boy's symptoms is what, apparently, brought the mother to the child guidance clinic. The "hump" aspect of the camel seems to be overdetermined, both as an expression of the lack of maternal love and as a sexual symbol with both oral and phallic properties.

CARD II

The first response to Card II uses one of the usual animal concepts, "fighting," which seems to indicate the impact of his first encounter with color. He does not mention color as a determinant spontaneously during the inquiry. The information could have been elicited in the routine phase of the administration, the analogy period; however, in this particular case—after 91 responses—this did not seem feasible. In any case, it is significant that he responds to color but does not mention color as a determinant on his own accord.

The second response uses the usual phallic area of Card II, where "pincers" are sometimes seen. He intensifies the dynamic implications of such a concept, not only by calling them scissors but by elaborating that "they are real hard to pull in." He even repeats that statement during the inquiry. This concept is probably based on a combination of *m* and shading effect, but again shading is not mentioned by him spontaneously. This points, again, towards introversive withdrawal with its reluctance to express dependent needs, rather than to a schizoid withdrawal.

The next response uses one of the brightly-colored areas. Strangely enough, we get the original "fish" response to it. How does the subject explain this association? He starts his explanation with an attempt to "whitewash the fish." He almost uses the shading instead of the color, but cannot keep up his denial of color to the end. He says, rather reluctantly, "Only these are red, sort of an orange color."

Faced with a decision between the greater evil—color—and the lesser evil—shading—he compromises by using both, but only hesitantly.

The next response turns to the white space, which has to be extended into some of the shaded material on top and on the bottom. Again, as in Card I, the response to the white space contains the most "pregnant" content symbolism. He sees, first, a bird in the ice age; but in the inquiry this changes to a contemporary concept—of all things, a "stork." First he sees the stork flying with no feet, but then decides to restore the feet to him by using some more of the blot area. We do have to remember at this point that his mother is pregnant with a third child, while he gives birth to this stork. He closes his responses to Card II with a head of a rabbit that does not show its eyes. It suggests a symbolic self-concept (following the "scissors" and the "stork").

Another aspect of his reaction—in addition to the withdrawal portrayed in the rabbit who doesn't show its eyes—is his interest in guns. This is revealed in the inquiry about his concept of "the outlaw." However, the outlaw does not show his face either, and is riding off in the distance.

Therapy Observations (Card II)

The patient's conflicts over aggression were a major concern of the therapy. His temper tantrums disappeared as soon as he began to dramatically act out aggressive material in the content of his stories. The first indication that a good relationship was established came when the patient brought a book of pictures of antique guns. He took it carefully out of his jacket pocket and intently discussed the various guns and their firepower. (Much later he brought a book of "French Post Cards" and handled it in the same way.)

The dynamic implications of the "scissors" concept, as is implied in the analysis, were evident in his coping with a basic anxiety over the possible loss of his masculinity. This was so important in therapy that a more detailed presentation of how this was made manifest seems indicated.

It was in the 17th session that the patient showed his first interest in examining the sexual characteristics of the dolls. He began by

having a boy doll tell his father off. He inadvertently used his own father's name, but quickly changed it. He then undressed all the dolls and examined the sexual parts, frequently giggling. We then talked about playing "doctor"; he admitted that he had wanted to, but hadn't for a long time. He began tearing apart all the dolls and putting them back together. (These dolls were made so that this could be done.) He ended the session by showing me all the marbles he had brought with him.

The patient missed the following week because of having the flu (and resistance). In the 18th session, the next week, he brought the magazine called "French Post Cards." After we had discussed the book, he selected a number of animals and people among the dolls and told a "Belgian Congo" story, as described earlier. A little later he started a story where a truck hit a boy and the boy hurt his leg and "maybe something else." When it was suggested that the "something else" might be the boy's penis, the patient began discussing sexual matters. He understood that if something happened to one's penis, a person would lose all his blood and die. He also believed that the penis, like every other organ in the body, got certain things from the food one ate. "If you didn't have a thing like that," he said, "you would have gases in you and blow up and die." When the therapist explained about sexual intercourse, he was intensely interested. He said he thought that the vagina was about where the stomach was and that was where babies came from. He told about the times in school when the girls were getting information and he tried to peek but couldn't find anything out. He said that he knew that newborn babies looked "sort of gooey" and that his own new baby brother looked like that. He then walked away from the doll house and, for the first time in therapy, began to tell about all the fears he had when he was little and how he would be beaten up by the other kids. It was his cousin who defended him. He then began to draw on the easel and said it was an X-ray. (His father is such a specialist.) He continued by saying that he sometimes wished that he could be a tough guy, maybe an "outlaw, like in the movies." (Note here the sequence of topics and the sequence of responses in Card II.) It was in this same session that the patient reported the birth of his new brother.

In the 19th session, the patient showed much resistance and hostility toward the therapist. In the 20th, he said that he wanted to be only average and didn't want to go to college. He wanted to be an X-ray technician like his father. During the 21st session, he suddenly said that he planned on failing the sixth grade. He said that he would fail because his father had done so. He went on to point out a number of similarities between himself and his father, but added that maybe he could be even smarter. When this was interpreted he said, "You know, I think I would really like to be a doctor." He went on to say that he would like to be both an X-ray technician and a doctor, go to Alaska and be a millionaire because he could do both. It was following these sessions that the patient became more competitive and markedly improved in his school work.

CARD III

He welcomes the obvious connotations of Card III with a "Ha Ha" and has no hesitation in seeing the usual men in action, but adds a superior specification.

After this he gives the usual association to the central inner red detail, where most subjects mention the color as one of the determinants for seeing a butterfly. He again does not do so spontaneously. When questioned later, he said that only the shape helped him.

The other red spot is used for a well-specified human response. He is somewhat ambivalent as to whether they are alive or dead and compromises again by saying "they will soon be dead when they hit the pavement."

In his response to small blot areas, the first, fourth and fifth responses still involve the usual connotations, but response number 6 is more far-fetched, if not peculiar. He uses the same area where he saw the butterfly, and sees a man's vest. This vest becomes, in the inquiry, the target for shooting practice and gets all shot up so that there is hardly anything left of it. As we can gauge the symbolic meaning of this original response, it seems to psychodramatize the conflict between his aggressive impulses, expressed in his preoccupation with guns, and "his vested interest" in being a poised man. We are reminded of the case history facts that he tries so hard to take the dignified role of his father (who has to be away from home a great

deal), the strong rejection by his mother of his manly offering, and the resulting frustration, leading to his aggressive fantasies. It is extremely interesting that the object of the shooting is not a living being but a plastic piece of clothing symbolizing the masculine role.

In the last response he uses the outer red areas to see two canes (later, he said that he used the color "in my imagination"). Surprisingly, after this, he transforms the ripped man's vest into a lady's girdle.

Therapy Observations (Card III)

The deduction from the analysis is in perfect accord with the therapy observations. Again and again the patient worked out his aggressive strivings, but always had the dual masculine ideal of the "outlaw" and the "poised man." The latter was thought of as a man with a bulletproof vest. When this was interpreted to him as a means whereby he would not get hurt, he accepted it with real affect. He always walked to the therapy room in a very "poised," even nonchalant manner, attempting to conceal his eager anticipation and, as he admitted, in order to be like a "smooth guy."

Frequently, the therapist observed how the ambivalence in the perception of the role of his parents seemed to represent, in nucleus, the beginnings of ambivalence in identification. It was the opinion of those who were associated with the case that the therapy helped abort such trends. The overdetermination of the symbolic content of "vest" and "lady's girdle" is quite manifest here.

An additional sidelight, which gives evidence of the close association between content and actual events, is the fact that the patient took a job after school as a pin-boy in a bowling alley. This was, to him, a very masculine job and gave him much prestige, both because of the type of work and the fact that he was earning some money of his own.

CARD IV

The combination of a complicated outline and rather provocative shading elements does not seem to stump him. There is hardly a delay in reaction time and he immediately sees rather elaborate movement responses. His elaborations in the inquiry are quite sug-

gestive. Instead of the usual giant he sees a midget clown. That this is not a mere coincidence is immediately demonstrated in his description of the tail, "with a long tail which is real wide." His strong ambivalence between his desire for masculine assertion—"the outlaw"—and his desire to withdraw into his fantasies, have placed him irrevocably in the dilemma.

In the second response he, for the first time, spontaneously and clearly uses differentiated shading as a surface elaboration. The feet of the midget clown are now seen as men's feet with big shoes, but this is followed immediately in another area of the blot by tiny men's heads. This contrast complex immediately leads to further specifications along the same lines: one is seen as a face with no mouth and the other with a "mouth a mile big." Both are looking up at the moon or at the sun. The two symbols again portray the contrast between femininity and masculinity. His preoccupation with size contrast has a quality of a personal complex.

Finally, what was the long or short tail of the clown changes into a cactus.

Therapy Observations (Card IV)

The concept of a "midget clown" in a circus "with a long tail or a little tail" certainly expresses the patient's image of his father. The latter was at once a good pal who was funny but also a threatening masculine rival, from whom the patient retreated in fear. As is stated in the analysis, the patient's ambivalence also included the desire for masculine assertion, but he was afraid of it and much preferred to express it in his fantasies. One of the most important experiences for him was the time, after the 23rd session, when he was able to stand up to his schoolmates and actually became involved in a fight. He told the whole story in detail and was very proud. He indeed had always felt that he was a "little fellow" despite the fact that he was growing fast and was even tall for his age.

The "raccoon prowling around" may be associated with the patient's doubt as to whether the father was seeking companionship elsewhere. He brought up the possibility but dismissed it by saying that if he did, the mother would go "pow!"

CARD V

At the beginning of Card V, he pulls a trick. He mentions first the usual response to Card V—"bat"—but in the inquiry he fools the examiner by picking out a small area that actually looks like a baseball bat, and calls it that. It almost looks as if he deliberately wants to fool the examiner into thinking that he uses transposition as one of his thought processes.

He follows with one of the more obvious contour concepts and then returns to his interest in scissors. He calls them "dull edged"—meaning that they have no sharp point. Right after this "surgical scissors" he has a pair of alligator heads with the mouths wide open, but he renders them harmless by seeing them as skeleton heads.

The fifth response uses achromatic color for the first time—"a black sheep's head." This is followed by a continuing interest in aggression, expressed in the content of the responses by two cannons and a rifle. He adds another fish's head, another one of his complex-like contents.

Therapy Observations (Card V)

The kind of cleverly oppositional thinking that is pointed out here in the "bat" response, and also in Card I, is best illustrated by a bit of behavior that occurred prior to one therapy session and was reported to the therapist by an onlooker. The boy had arrived very early, as was his custom, and looked for a moment at a woman who was the mother of a schoolmate of his. The woman had mixed feelings about coming for treatment and did not want anyone to know that she was coming to the clinic. Our patient walked up to her said, "Oh, are you coming to see your psychologist too?" He made a circular motion with his finger around his ear (the "crazy" sign) and said, "Me, too."

The "baseball bat" response also has some personal content. As noted earlier, the patient had great doubts about his athletic ability, but he went out for a baseball team during the summer. He achieved some success in playing and it was obvious that it had a phallic meaning for him. Surely, however, his athletic prowess or lack of it pro-

vided only a "dull edge" of castration fear in comparison with his family relationships.

The "black sheep's head" is probably associated with his feeling, though never expressed in therapy, that he was very different from his parents. The mother, however, stated in her own therapy that her son was very different from both parents. He was smarter, better looking and more imaginative. It is quite possible that the boy reacted to this by feeling unwanted—which in turn, as noted in the analysis, brought up aggressive attitudes.

CARD VI

He starts his response to Card VI with a dysphoric use of shading, which he expresses very pointedly: ". . . looks like one and smells like one." This is in conjunction with the "belly-gutted cat."

There is no more question about his strong responsiveness to shading and the intensity of his conflicts associated with it.

For the second response, he uses the usual phallic area. The content of this response, "hands tied real close together," seems to indicate some strong concern about masturbatory activities.

After this he goes into an orgy of using small and tiny protrusions sticking out from the edge of Card VI. None of his 11 answers to those phallic, protruding areas are inaccurate or far-fetched in their content. In fact, he leans over backwards in being apologetic. In response 10 he says, "They may not look like ducks' heads to you but they do to me." This is a fairly obvious association to the particular blot area. It might be added that the belly-gutted cat, combined with the concept bee, in an area that usually has vaginal associations, illustrates his hostile feelings toward the female of the species. This is immediately modified in the inquiry, however, with the specification of the hind end of the bee "where the honey goes up."

Therapy Observations (Card VI)

The dysphoric use of shading certainly does correspond with the patient's ambivalence about his dependent needs and, as hinted in the analysis, the content and sequence reflect the conflict and its

underlying cause. The therapy material definitely indicated rather severe castration anxiety, as the "belly-gutted" cat suggests. (See Therapy Observations to Card II.) The impression of strong concern about masturbatory activities is consistent with the therapy impressions, but there is no direct evidence for this. In the same session where the patient talked about his understanding of sexuality (Interview 18) he admitted, but only under direct questioning, that his penis sometimes "got hard." He was sheepish about this, but immediately asked for information about "things like that" because he had been awfully confused about it "a year ago" when his father explained it to him. The only other time that this came up was two sessions later, the twentieth. In the latter session, we had been discussing the patient's feeling that he wanted to be only average and not do better than his father. He began making a series of snakes with clay. One of them was in an erect position, looking remarkably like a penis, and the others were in various positions—draped over a log, coiled, or "sleeping." When asked what the erect snake looked like, he said "a snake" and demonstrated how a Hindu fakir plays the flute and charms snakes. The therapist told him that it looked like a penis to him. The patient responded, "Maybe it looks like one to you, but not to me."

The response to the vaginal area as a "hind-end of a bee where the honey goes up" is particularly appropriate for the patient, since his previous sexual instruction included the usual description of the activities of bees. Note, too, that "birds" are brought in—as woodpeckers, no less! He certainly was confused about the whole thing. (See Therapy Observations to Card II.)

CARD VII

In Card VII he gives almost as many responses as in Card VI. The variegated contours, together with the shading elements, seem to stimulate his imagination very much. The only original response in Card VII is the fourth response—"diving boards"—which he quickly changes in the inquiry to the more usual dog's, cat's, rabbit's tail. This again suggests an association of a personal experience with diving boards. In the even more usual vaginal area of Card VII he sees

a turtle's head and a bat. Only in the inquiry does he add the response "building." This answer is quite popular and expresses a phase of emotional development in children from four to six. At his age, this response seems to express a longing for the security he did not get.

Therapy Observations (Card VII)

It is not surprising that the shading in this card also stimulated his fantasy; it was the therapist's opinion that the patient was extremely sensitive and that his sensitivity found outlet only in imaginative activity. Later, the patient was able to express his tenderness toward his new baby brother. It was felt that the patient was attempting to fortify a phallic level of adjustment and that he would not be able to integrate his more tender qualities until late adolescence or early adulthood.

No material relative to "diving boards" appeared in the therapy. The patient mentioned swimming only once and this was in a conversational, non-affective context.

The suggestion that there was a longing for security that he did not receive from the mother was borne out, as noted earlier. It was the opinion of both the mother's therapist and the boy's therapist, however, that the mother was certainly not the "monster" that the boy sometimes projected on her. Her unconscious counter-Oedipal feelings certainly contributed to the boy's neurosis, but both therapists felt that his mother problem had many archaic elements in it which were not directly induced by his actual mother. The "ancient" aspect of the building response also suggests this.

CARD VIII

The first response to Card VIII is the usual one, but he feels compelled by one of his complexes to immediately change the usual bears to a fish without a head. It does not seem to be a coincidence that this decapitated fish is followed again by a series of aggressive contents. He cleverly combines these contents with determinants that dramatize his aggression further; the guided missile that is "going very very straight up" or the "rats climbing over dirt and things." The little pink area enclosed in the bluish detail of the blot

is picked out and seen as airplanes that do not have any wings. He does use the shading here.

After the usual skeleton bones, he gives his second most original significant answer. He combines the orange and pink bottom area and describes it as a man's body without any skin. This is the first time that he mentions his use of color without any hesitation. The answer seems to express, symbolically, his feeling that he lacks the safe protection of a skin when he faces the emotional issues of his life.

After this, he escapes again into the antique world, with a Roman soldier and, further back in time, with a dinosaur.

Therapy Observations (Card VIII)

The statement that the patient feels that "he lacks the safe protection of a skin when he faces the emotional issues of his life" is one that exactly describes the therapist's opinion also. As one came to know the family history and the psychological characteristics of the various people in it, one felt that the parents were neither seriously neurotic nor even abnormal. Rather, it would seem that the patient was endowed with superior intelligence and unusual sensitivity, which made him react strongly to situations that would evoke less intense reactions in less sensitive children. Whether this was due to experiences during the first year or two of life or whether it was based on constitutional factors is unknown. At any rate, the patient's "thin skin" was both his gift and his Achilles' heel. The sequence of responses following the "man's body without any skin" (Roman soldier and dinosaur) certainly suggest more and more archaic origins (beyond his personal life experience).

The "dagger" response recalls an incident in the 24th session. Previous to this he had been more aggressive at school and at home. In this session, he knocked over various animals, including an elephant which he had earlier called "daddy." He accomplished the latter only by means of throwing a baseball at it. He then strutted about the room, holding his arm up and making a muscle, as if to show how strong he was. He then showed the therapist a "tattoo" of a dagger on his wrist, made with ink. He said that this was his dag-

ger and that it would "shoot out." When the therapist remarked that the patient was pretty strong, the latter strutted even more. When asked if he felt he was even stronger than his dad, the patient laughingly responded that he was not, that they were both strong and did not have to fight each other.

CARD IX

The first two responses to Card IX again contain many of the conflicts that lead to a lively psychodrama. It is remarkable how well he can use the obvious implications of the given stimulus material to accomplish this. The next four answers follow along similar lines, and only response 7 gives the examiner an uncomfortable feeling. The concept of disembodied eyes is more likely found in schizoid records. Since he uses some tiny white spaces, instead of taking the eyes out of a usually unbroken surface, we can set aside the possibility that this response is indicative of a schizoid condition.

He further reassures us by seeing the usual moose head immediately afterwards. Even the fat butchers become better adjusted by chopping up meat, instead of running after the witches. Unfortunately, two responses later, this turns into a man who has a tail sticking out and runs around trying desperately to get help for this misplaced instrument of aggression. Whereas he began his responses with a reluctant use of color, he closes with one more free use of color, this time as peaceful as it can be: "the blue sky above—just like it is outside today." It seems he feels that the help the little man was trying to get is near.

Therapy Observations (Card IX)

It is quite fitting that the analysis uses the word "psychodrama" to characterize the boy's approach. As can be seen from earlier comments, every therapy session was full of dramatic, even theatrical, storytelling and play. The 27th session was preceded by several interviews in which many transference problems were worked out in the context of competitive games. He frequently changed the rules so that he could win the games, if he was losing. In this session, as the patient was about to lose a game of dominoes, he began to

change the rules again. The therapist suggested that the patient was afraid of losing and that perhaps regular rules would be better. He assented and then lost the game. Asked if he wanted to play according to his rules now, he said no. For the remainder of the hour many games were played according to regular rules, with about the same number of games being won by each. He would frequently go into some histrionics about his losing or dying and being killed, but this was always in a theatrical, actually jovial, way. When this behavior and the content were picked up, he dropped his pose for a moment and grinned warmly. It was as if there was full mutual understanding.

The "help for the little man" was somewhat touchingly demonstrated in the 27th interview. Several previous sessions and this one were charged with hostile transference phenomena. (In this session there was a recurrence of the headache symptom.) After this reached its height, there was a pause, and the patient picked up a torn football. He moved the separate parts, as if the football were talking. He asked the therapist if the latter could figure out what the football was saying. The therapist said no. The patient said it was saying "that I like you and always have." The therapist responded that he liked him too and always had. The time was up, and when the therapist mentioned this the boy said, "Gee, it sure goes fast." He added that he didn't have a headache any more.

The "dunce hat" was truly a painful one for the patient. He once tearfully confided that he wanted very much to do better in school but just couldn't. After he had worked with his problem of sexual curiosity, the teacher reported that the patient began to read the encyclopedias at school and seemed almost voracious in his desire to get knowledge. It was a proud day when he brought up a report card showing one A and several B's, with only one C. His parents were pleasantly flabbergasted (as was the therapist).

CARD X

Card X, with all its widely dispersed blot material, really gets him going and he rattles off 15 responses in a short time.

These 15 responses contain one more free use of color—the cardi-

nal in the outer yellow area (he may confuse cardinals with canaries). The best way in which one can characterize his reactions to Card X is that his responses are more full of life than in any other card. Among these "life" responses, is the concept of "boys kneeling down to say their prayers," the only appearance of human beings in a peaceful occupation since he saw the men bowling in Card III. The animals, on the other hand, are full of fight and spirit. Toward the end they are joined by three-legged men "coming off the rocks to fight each other." Among the other responses we find one more woman's girdle. The choice of the area suggests strongly that he means a brassiere rather than a girdle. His emotional entanglement in this confusing world of objects is nicely symbolized by the girdle and a boy's tooth in the middle of the same area. The last few responses seem to express a desire for a more peaceful and constructive approach to all his phallic conflicts. He sees a boat coming out of the boathouse and an airplane which, this time, serves exclusively for refueling purposes; and the phallic top part of the card now becomes a sink pipe, a constructive part of home plumbing.

Therapy Observations (Card X)

The analysis hints at the favorable prognosis and good potential ego-strength: the "more peaceful and constructive approach to all his phallic strivings." This achievement was perhaps shown by two incidents in the 28th session, by which time he had seemed to work out the more painful aspects of his problems.

One incident occurred when the therapist and patient were again playing a game. In contrast to previous sessions, he was less involved in winning, enjoyed the game itself, and was even polite. He remarked that it was even more fun to play the game this way.

The other incident of the same session was where he, at first shyly but later joyfully, talked about his giving a valentine to a long-admired girl friend and her giving him one, too. It was as if he was pleasantly startled to find that a girl might like him.

By this time, too, all the home problems involving the patient had been worked out and termination was being considered.

Summary of Rorschach Interpretation

Leaving the further discussion of all content symbolic associations until after the psychotherapy material is presented, we can merely summarize the clues that are important for our differential diagnostic decision.

The thought processes show a loyalty to reality in the form level of the responses, which goes considerably beyond what we would expect as a minimum standard for a normal person. We merely raise the question whether there is a compulsive preoccupation for form-accuracy. This assumption is contraindicated by the lively use of his imagination, by his flexibility in the use of blot areas, and by the variety of his concepts. The few instances where his ideas become far-fetched occur exclusively in places where he shows a strong emotional involvement. There is no trace of the flattening of affect and impersonal attitude to emotional stimuli that we would expect in a schizoid personality. In fact, his struggle with emotional stimuli is so intense that we had to use the expression "psychodramatic" to describe his reactions.

Therapy Observations

Aside from the inference of possible compulsive features, which were never considered in the therapy, the impression from the therapeutic work coincides with the Rorschach analysis. Particularly striking, and perhaps unusual, is the way that certain content symbolism had a direct and sometimes over-determined relationship to the patient's actual preoccupations and even to some of his activities. The sequence analysis, in particular, surely mirrored his thought and affective processes.

Second Rorschach

The second Rorschach protocol, administered ten months after the first Rorschach and after 30 therapy sessions, follows. (The first and second Rorschachs were administered by the same examiner.)

Second Rorschach: Protocol

CARD I

PERFORMANCE

2"

1. This is little batty again.
2. > This way I see an eagle.
3. √ In this direction I see the head of an eagle.
4. < I see the Aleutian Islands.
5. Oh and I see two little heads.
6. √ I see a pair of eyes. That's all.

INQUIRY

1. Bat. (Q) Looks like it's little tiny claws of the bat . . . it looks as if two bats were fighting right along side of one another and you see one claw of each.
2. Two eagles—not in full body. (Q) Just the way they looked—like they are flying.
3. Bald American eagle's head. (Q) Looks like the back of the head—like in a museum.
4. All these little dots—just any group. (Q) Map.
5. Two little heads of a person. (Q) Cartoon characters.
6. (Q) Have you ever seen a cat in the dark and it looks just like the eyes of a cat only one part has been hurt and it won't shine.

CARD II

PERFORMANCE

3" Oh!

1. First of all I see my friend Storky.
2. Body of a bear.
3. √ Human head.
4. I see a face of a man; he looks like he has a busted nose. (Giggles)
5. Those things in a cave that hang down from the ceiling.

INQUIRY

1. Stork . . . Well I've seen a lot of pictures of it and it made me think of it with a necktie, long bill and flying to get or deliver a baby.
2. Bear's body. (Q) It looks like a bear sitting up straight. (Q) I pictured it without any head, just the body.
3. Human head, nose, mouth, chin and head. (Q) In the edges the chop strokes of the picture—the inside.
4. I've seen a few crooked noses and this one reminded me of just a busted nose . . . Like one of those cigar Indian noses.
5. Those things in a cave . . . it just looks like some that were red and were sitting for so long that they stuck together in one group.

6. Oh, I just about forgot—I see a bunny rabbit. That's about all.
6. Bunny rabbit . . . it looks like it's hopping and it's got red eyes. (Q) I see it with a nice blackish red body—like it's going around 30 miles an hour and it's spitting something out of its mouth.

CARD III

PERFORMANCE

2" (Hoo, Hoo, Hoo!)

1. I see a couple of bowlers.
2. I see a couple of people that are falling through mid-air.
3. Butterfly.
4. Well, I see two islands. That's all.

INQUIRY

1. Well, you want to see the two professional bowlers—they're right here. (Q) The way they're slouched over. Looks like they're just getting ready to start their run. (Q) Man.
2. Two men falling through the air. (Q) Like they had been pushed over backwards and they're all crumbled up and I see their noses and eyes and hair, that's what made me think of humans. (Q) Well, the way they are.
3. Butterfly—wings—just a butterfly as he is flying through the air.
4. The way they were curved—sort of a rough shape.

CARD IV

PERFORMANCE

3"

1. Well, first of all I see some kind of cat wearing giant-sized shoes.
2. I see some carrots.
3. The head of a beetle.

INQUIRY

1. Now you must see the first one here is a cat—the whole area—here are the big shoes . . . head. (Q) The way of the head reminded me of some kind of cat or raccoon. (Q) The difference between little lines inside . . . the back of a cat's head. (Q) Walkin' along, dragging his tail behind him.
2. Carrots—the shape—looks like somebody just cut off the ends of the carrot and the eating part was still there.
3. Head of beetle. (Q) Looks like he's got his two big feelers really stickin' out and two inside feelers in close—detecting something.

PERFORMANCE (*continued*)INQUIRY (*continued*)

- (1) Spikes on the bottom of the shoe—
the cat's shoes.
4. V And a lamp.

4. Lamp . . . the way it was fixed. Looks like it had its little handle sticking up so you could take the top off—like Aladdin's lamp.

CARD V

PERFORMANCE

2"

1. Well, I see an alligator.
2. Then I see two kinds of bird heads.
3. V I see one of those piers.

INQUIRY

1. Alligator head—alligator eyes. Jaw part. (Q) I see it as it's just opening its mouth.
2. Both on opposite ends. (Q) It looked from each angle like well, this bird head looks real hungry 'cause he hasn't got his food yet and this one like he just got a worm.
3. Pier . . . (Q) It reminded me of one just the way it's stuck out—reminds me of a pier.

CARD VI

PERFORMANCE

2" Well (laughing)

1. I see a cat's head.
2. Pair of hands.
3. V I see four little hooks.
4. V Two mooses' heads.
5. > ^ Two little mice.

INQUIRY

1. Cat's head—you've seen Sylvester in the cartoons—the neck sticking out reminded me of Sylvester.
2. Hands. (Inside top dark area) It looks like they're down like this pleading or praying or something like that—more or less cupped.
3. Hooks—bailing hooks—two top ones; bottom one, plier hooks that you use for ticks on cows.
4. Moose head . . . I don't know what gave me the idea . . . I just said a moose head, I don't know what for.
5. Little mice sticking out heads. (Q) I see them as if they really are running across somewhere—as if they're really goin' to town.

6. Oh, a couple of birds.

7. One little insect. That's all.

6. Two birds sitting on the same branch chirping . . . one chirping, the one to the right, and the other says go ahead if you want to.

7. This tiny little thing . . . most insects from far away look just like dots . . . just there . . . like he was stone dead.

CARD VII

PERFORMANCE

4"

1. This one I like . . . two mules.

2. Two rabbits.

3. Castle . . . smoke.

4. V Muskrat's head.

5. > Hippopotamus. That's all.

INQUIRY

1. Mules . . . the way of the head . . . the ears sticking up . . . a little old short tail . . . like it was cut off. (Q) Like he is goin' up a hill or something.

2. Same thing . . . but only the tail instead of being cut off . . . just a little old short tail . . . getting ready to jump.

3. Castle . . . looks like a sultan's castle. Two big domes sticking up in the air—as if it was way way in the distance. (Q) This little line coming up from a sultan's castle . . . just the way it's going up. (Smoke)

4. Muskrat . . . as if it was just coming out of a hole as if it just woke up . . . just the head.

5. Just the head of a hippopotamus . . . the shape of the head.

CARD VIII

PERFORMANCE

2"

1. This is the one I like the best. Some kind of animal. I don't know what you'd call them though.

2. Two little fish.

3. Rhinoceros head.

INQUIRY

1. It looks like it's walking from one rock to another. (Q) A raccoon or something of that nature.

2. Fish . . . those black and white fish. (Q) The colors. (Q) You can just make out the tail then you got to imagine the lines—it comes around this way. (Not well specified)

3. A rhinoceros head—big horns sticking out . . . just head, some collection of somebody's.

PERFORMANCE (*continued*)

4. √ Umbrella
5. Lake Erie.
6. An elephant with a nightgown on (laughs).
7. A finger pointing at someone.

INQUIRY (*continued*)

4. The umbrella you have to kind of imagine but it's right there. Looks like the umbrella's been opened.
5. I just give it a lake name—the idea of a lake.
6. This is one of these you got to kind of imagine. I can't pick it up. (Denies)
7. Finger . . . looks like somebody's going thatta way boy . . . you better do that or else or as Mr. L. (teacher) says instead of slitting them from ear to ear . . . just make his mouth bigger. (Laughed)

CARD IX

PERFORMANCE

3"

1. > Chiang Kai-shek. No offense though, I hope.
2. A man with a nose like a finger.
3. An alligator head.
4. A full-lengthed alligator.
5. A bear.
6. A pair of antlers.
7. A dog.

INQUIRY

1. Chiang Kai-shek . . . here's his Chinese mustache . . . here's his eyes, nose . . . a few hairs in the back of his head . . . just sittin' there.
2. I can't find it . . . I found it . . . just the nose . . . the man disappeared.
3. Alligator head . . . it looks like it's real scaly . . . it's just rising above the surface. (Q) The painting is real rough at that part.
4. Alligator . . . (Q) Nice and scaly like an alligator is. (Q) Floating on the top of the surface of the water.
5. Looks like a bear . . . pug nose, head. Looks like it just woke up and goes aah, aah, aah. (Cupping hands over mouth)
6. Antlers . . . just the way they look.
7. Just a dog's head—you can see his eye and his neck like a cartoon.

CARD X

PERFORMANCE

3"

1. Well, here is a tropical one, fish.

INQUIRY

1. It looks all so tropical. I just named it a fish—looks like it's got fins and everything on it. (Q) The color also.

- | | |
|--|--|
| <p>2. Seahorses.</p> <p>3. Crab.</p> <p>4. Sea plant.</p> <p>5. Two kinds of fish kissing.</p> <p>6. V Some tonsils.</p> <p>7. A tooth.</p> <p>8. A boat-like plane fighting, a crab.</p> <p>9. Two islands. That's all.</p> | <p>2. Seahorse . . . the way their back is curved and the way their head is. (Q) Color there.</p> <p>3. The way all these pincers are stickin' up. (Q) Just there.</p> <p>4. Sea plant . . . just thought of it as a plant.</p> <p>5. Fish kissing . . . a tooth.</p> <p>6. (Q) Color had something to do with it and my imagination did the rest.</p> <p>7. Tooth.</p> <p>8. Boat-like plane . . . I should have said a plane-like boat . . . I've never seen one fight but that's the way I saw it.</p> <p>9. Two islands—on a map.
Add: Two boys. Looks like they're saying their prayers or else getting up from saying prayers.</p> |
|--|--|

Second Rorschach: Quantitative Data

M = 4 + 4
 FM = 19 + 2
 m = 1 + 4
 K = +1
 FK = 1
 F = 24
 Fc = 3 + 2
 C' = +1
 FC = 4 + 1
 CF = 1 + 1

H = 3 + 1
 Hd = 6
 A = 25
 Ad = 9
 At = 1
 Food = 1
 Obj = 5 + 1
 N = 2
 Geo = 4

R = 57 + 1
 RT I, IV, V, VI, VII = 3"
 RT II, III, VIII, IX, X = 3"
 Total $\frac{F}{R} = 42F\%$
 $\frac{F + Fc + FK}{R} = 51\%$

W = 3%
 D = 47%
 d = 14%
 $\left\{ \begin{array}{l} dd = 23\% \\ dr = 3\% \\ S = 9\% \end{array} \right\} 34\%$

$$\frac{A + Ad}{R} = 60A\%$$

$$P = 4 + 1$$

$$O = 17 + 5$$

$$(H + A) : (Hd + Ad) = 28:15$$

$$M : \text{Sum } C = 4:3$$

$$(VIII, IX, X)\% = 38\%$$

$$W : M = 2:4$$

Succession = orderly

Comparison of First and Second Rorschachs

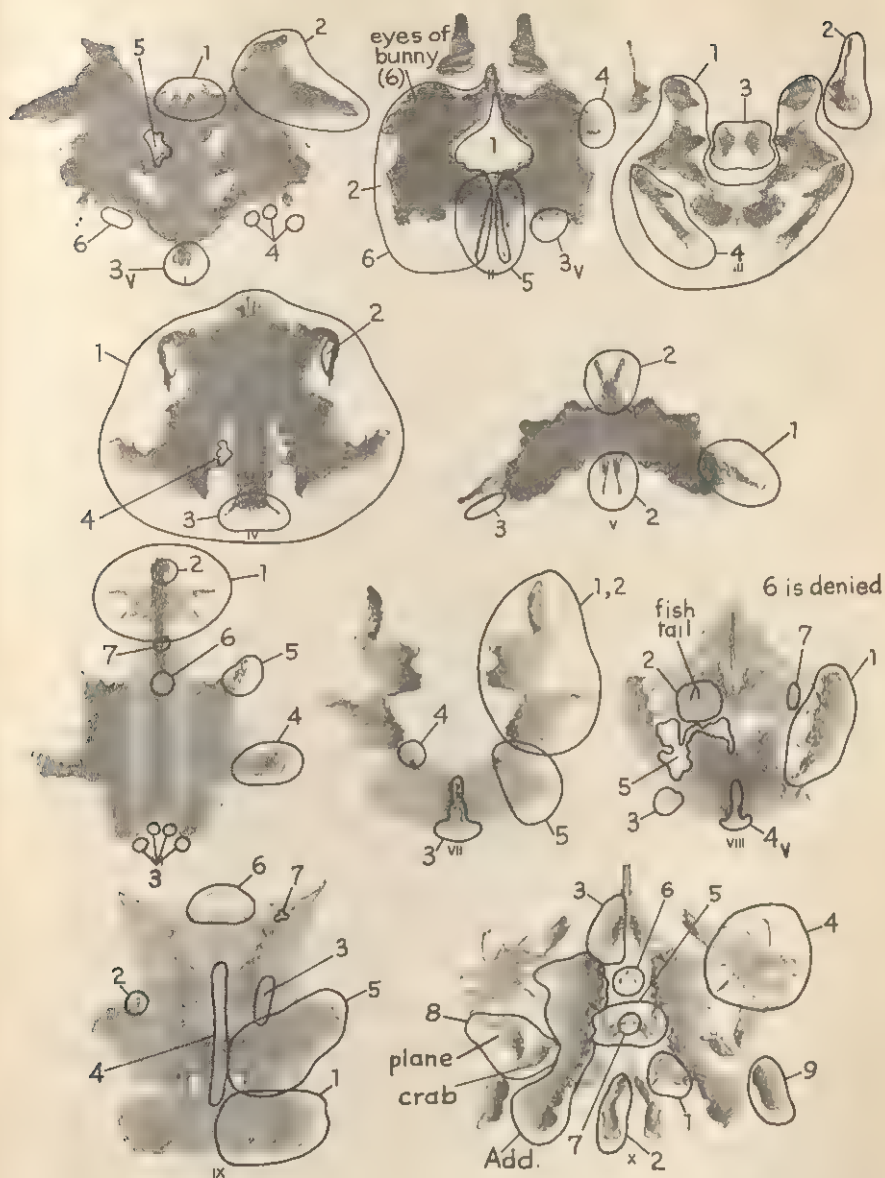
Quantitative Comparison

The number of responses drops from 91 to 57. This may or may not have anything to do with the therapy. It seems a general trend (not yet statistically demonstrated in the published research) that repeat performances tend to produce a number of responses lying more in the median range: short records tend to become somewhat longer and long records somewhat shorter.

More significant than the general reduction in the number of responses is the type of response that drops out. The comparison of response sequences will demonstrate that virtually all responses in the first record that could be interpreted as clues for the workings of autonomous complexes disappear. Simultaneously, the $F\%$ drops from 55 to 42, indicating that the disappearance of the complex reactions carries with it an increase rather than a decrease in emotional spontaneity.

Two important relationships between scoring categories show marked shift in emphasis, confirming that the quantitative changes between the two records do show the positive effects of the therapy:

1. $W : M$ changes from 3:11 to 2:4. The relationship between internal resources and external accomplishments still shows an unfavorable balance, but it has lost its grotesqueness. The unfavorable balance left can be considered quite usual for gifted young adolescents.



SECOND RORSCHACH Location Chart

2. *M* : *Sum C* changes from 11:4 to 4:3. The extreme introversial condition prevalent at the time of the first Rorschach disappears. The change is due to a reduction in the boy's concentration on his fantasy activities. A better use of his extraversion capacities is not yet visible in the quantitative scoring picture. However, he does show less reluctance to admit some interest in color and shading stimuli.

Comparison of Response Sequences

CARD I, CARD II, CARD III

Among the disappearing complex responses are the fish in Cards I and II, the scissors in Card II, and the vest and cane and the lady's girdle and shoes in Card III.

New in the second Rorschach is the more aggressive use in Card I of the bat idea. He uses even less of the top center area, but visualizes there one claw each of two bats fighting, instead of just the shape and mouth of one bat. New also is the spontaneous (even though not very vigorous) use of the red color in response to Card II.

CARD IV, CARD V

The peculiar preoccupation with size contrasts, which was most marked in Card IV, disappears. The clown in the same card now changes into a cat dragging its tail. The tail is seen in the same place where he previously saw a cactus. A new response in Card IV is Aladdin's lamp, one of several original white space responses, indicating a more realistic delineation between fantasy and reality. The many animals' heads previously seen in Card V are now reduced to two sets of birds' heads: one looks "real hungry" and the opposite one "like he just got a worm." This shows he is still playing with contrasting ideas, but there is quite a difference between his previous almost bizarre preoccupation with size contrasts and his new interest in oral gratification. In the same card the cannon and rifle are replaced by a pier.

CARD VI, CARD VII

The number of responses in these two cards alone drops from 21 to 12. Most striking is a change in the treatment of Card VI. The "belly-gutted dead cat" is replaced by "Sylvester sticking his neck out." He is now satisfied to use just the top part of the card for his cat idea. This same top part of Card VI, with its usual strong phallic implications, produces another significant change. The two hands "tied together—real close together" are now "pleading or praying . . . more or less cupped."

The building in the bottom center part of Card VII, which had merely "an ancient huge round thing on top" in the first Rorschach, now becomes inhabited, a "sultan's castle" with "two big domes sticking up in the air" and smoke rising from it, "as if it was way, way in the distance." He seems now satisfied to win his Oedipal battle in fantasy, replacing the unyielding mother with a whole sultan's harem.

CARD VIII, CARD IX, CARD X

The 38 responses to these cards in the first Rorschach boil down to 23 in the second. Again the responses characterized as complex responses in our sequence analysis carry the burden of the drop. Typical of his new responses are the "umbrella" in Card VIII, and the "elephant with a nightgown on" in Card VIII, number 6. He obviously does not take his fantasy life so seriously as before.

We mentioned previously his more tolerant attitude to color.

Conclusion

The general agreement between the interpretative inferences drawn from the responses to the first Rorschach and the clues picked up in the therapy are so striking that it is hard to imagine that the Rorschach interpreter was unfamiliar with the details of the therapy when he made his statements. This type of agreement can best be categorized under such a heading as "intrinsic objectivity" and may be related to the concept of "congruent validity" discussed in Chapter 9 of this volume.

From the practical point of view, the main points to be learned from this case study are as follows:

1. In cases where either the referral problem or the diagnostic testing show some alarming facets, thorough analysis and integration of all available information are indispensable for sound planning of treatment.
2. The reassurance to be gained from clues of unused ego strength is a valuable asset in the beginning of treatment.
3. The comparison of therapy observations with concomitant changes in the diagnostic testing picture can give reassurance that the behavioral changes during therapy are not merely expressions of transference reactions, but are rooted in actual changes in the personality organization. This in turn facilitates decisions about the optimal time for the closure of treatment, and may provide valuable insights into the nature of the therapy process.

Therapy Postscript

Therapy was terminated with the 36th interview. The decision was made partly on the basis of the results of the second Rorschach. The possibility of termination was brought up in the 32nd interview with the boy. He was at first reluctant to terminate, saying that coming to the clinic and "chatting" with the therapist was a "treat." In the next interview, he expressed much aggression toward the therapist; but when we talked about therapy, about all the problems he had at first and how he had been able to solve them, he listened attentively and then said "Doo, Doo, Doo." He explained that this was a secret club word meaning, "Thank you, I agree with you." The mother had reported an incident to the social worker in the previous session. The boy had been watching a television program in which a psychiatrist had been examining a manic depressive. The boy said to his mother that he had been having therapy, too, but he wasn't sick like that. The mother agreed and said he had been sick in a different way, he had been unhappy. The boy agreed but said he wasn't unhappy any more. The mother answered that she felt the same way and that she had been going to her therapist to get help, too.

One other element, vindicating another aspect of the first Rorschach interpretation, was revealed when the therapist questioned the boy about swimming. He said that when he was four or five he almost drowned but was rescued by his cousin. After that, he always had a fear of swimming and diving. During the first summer of therapy, however, he literally "dove in" and has since enjoyed swimming and diving very much.

Subsequent sessions (33rd through 36th) were quite positive in content. The mother reported great improvement in the boy. He had become more independent and much more considerate. Family relations were much better. A report card showed much improvement in grades. The father was rather suddenly assigned to Europe in his work; but the whole family was able to go along, and all were very excited about it. Conveniently, the trip was to take place two weeks after the termination of therapy.



The Psychological Significance of Age Patterns in the Rorschach Records of Children

Age patterns typically found in the Rorschach records of children have been described in Chapter 2. It has been shown that *magic-wand perseveration* is typical for the child of three, *confabulation* for the child of four, and the *confabulatory combination* for the child of five years of age. To relate these patterns to developmental constellations of personality is the difficult task of this chapter. It is also necessary to relate the behavior reflected in the Rorschach patterns to other typical behavior, examine this behavior in the light of several theoretical frameworks that attempt to conceptualize the development of personality, and thus try to understand why these patterns occur.

The sources leaned on most heavily for a rationale of age patterns in the Rorschach are psychoanalytic and Gestalt theory and the work of Piaget. These three theoretical frameworks complement and amplify one another. The relevant psychoanalytic concepts have been discussed in the Appendix to Volume I; the relevant concepts of Piaget and the Gestalt psychologists will be discussed below. The basic relationships between Rorschach behavior and theory were hypothesized in Chapter 16 of Volume I.

At this point it is necessary to make an important distinction that has not been made very clear previously: namely, the distinction between reality *orientation* and reality *testing*. Reality orientation is

taken to mean an interest in objects and relationships of the external world—an interest, then, in perceptual phenomena. Reality testing refers to the attempt to strike a balance between the notions one holds and external objects and relationships—in other words, a balance between conceptual and perceptual phenomena.*

In analysing Rorschach behavior and relating it to personality theory, it is assumed that a certain analogic parallelism exists between dimensions of Rorschach behavior and personality variables. The manner in which the subject perceives the blot *per se* is assumed to disclose something of the manner in which he perceives objects in general; that is, it tells us something about his reality *orientation*. The nature and kind of concept he projects on the blot, which is assumed to be typical for other concepts he entertains, reveals something of his conceptual realm, its depth, variety, and penetration. The manner in which he matches the concept and the percept (the shape of the blot) reveals the manner in which he typically harmonizes concepts and percepts; that is, it tells us about the manner and adequacy of his reality testing. The manner in which he approaches the task and understands the instructions is typical for the way in which he approaches other tasks (at least new and unfamiliar ones) and thus tells us about his coping behavior and the development of the mastery function.

The Magic-Wand Perseveration (Age Two to Four)

In the magic-wand perseveration the child uses a whole concept that has very little relation to the properties of the ink blot; and he continues to use this concept throughout the ten cards, after the first response has received the "approval" of the examiner. It seems

* Reality orientation refers to a specific direction of libido—that is, its extraversion from its original cathexis on the primitive self in the stage of primary narcissism to object cathexis. Reality testing, on the other hand, refers to a much more complex function, namely the function of judgment. On the intellectual level, the organism must judge whether his concepts about relationships between objects are in harmony with his observations (perceptions); that is, it refers to a process of verification and falsification. On the affective level, he must judge whether his actions or contemplated actions are socially appropriate.

apparent that the child does not respond to the ink blots themselves, but to the total testing situation. He is asked to perform and does so in some way without testing whether the performance conforms to the requirements of the request or is in harmony with the properties of the blot. The child seems to have some understanding of the general, total situation, but he fails to react in a differentiated and discriminative manner.

Gestalt psychologists have demonstrated that the first response to a new perceptual pattern is a global one and that only later does the perceiver pay attention to details. Development proceeds from an original crude "whole-response" organism, through a phase of increasing differentiation of needs, functions, and actions, to an organism whose many differentiated needs, functions, and responses are organized in an integrated hierarchical manner. At this age level (two to four years) further clarification of the necessity of a global response is given by Lewin's concepts that the inner world of the young child is relatively undifferentiated, that few boundaries exist in inner-personal regions, and that whatever boundaries do exist have a highly permeable character. Tensions arising in one region can spread rapidly to other regions, so that the organism tends to respond as a whole rather than in a partial, limited way.

In the case of the magic-wand perseveration, the boundary between levels of reality and unreality is tenuous. The child recognizes a part of reality—namely, that something is demanded of him—but the response is on the level of unreality. Thus it appears that reality and unreality are largely one region, with little differentiation between them. This expresses itself in many aspects of the child's behavior. For example, the child fills a sheet of paper with scribbles and then gives the scribbles a name. There is no similarity between the scribble and the object it allegedly represents, but the child is highly satisfied with his effort simply because he does not recognize the discrepancy between the form of his production and the form of the object. When given a Rorschach he understands that something is demanded of him, but his inner world is not sufficiently differentiated for him to recognize the specific tasks.

The boundary between the inner-personal region and the motoric

region also seems to be highly permeable. The request of the examiner produces some tension in the inner-personal region, which appears to discharge almost immediately with the first response that comes to the child's mind. There is little selection or evaluation of the response.

Expressed in psychoanalytic terminology, there is as yet little inhibition of the motor response to an inner impulse, and little delay or postponement of motor innervation, which delay serves as the basis for development of sustained thought processes. The child does not act; he "acts out." He has emerged from the oral phase of development and has entered the anal phase. Some of the oral-passive mastery and feeling of omnipotence have been renounced with the beginnings of a realization that love, affection, and gratification are not forthcoming at his mere whim or cry. He is expected to do something in order to achieve gratification of his needs. The needs involved are needs for narcissistic supplies; approval has become a means of gratifying the narcissistic needs and thus bringing about heightening of self-esteem. Omnipotence has now been projected upon parents and other adults. They are, so to speak, the powers who can give or withhold the needed narcissistic supplies. The child is now willing to give something or do something in order to receive satisfaction. He has entered the phase of active mastery. In the testing situation, he gives a response in order to obtain implicit or explicit approval of the examiner. It is doubtful whether an examiner who was trying to be aloof and "objectively" non-committal in his expression and behavior would be able to elicit any response from a child of this age; however, this is an area in which experimental studies would be highly fruitful. It seems, then, that the child is responding in order to obtain immediate gratification of his narcissistic needs. His behavior is still governed by the pleasure principle.

The above observations also seem to shed some light on the anal conflicts that occur at this age. From his Rorschach performance, it would appear that the child does not fully understand what is expected of him: he understands that something is demanded of him, but his inner world is not sufficiently differentiated for him to recognize the specific tasks of sphincter control. Perhaps, also, a degree

of inhibition of motor impulses is demanded of him that he is not yet ready to accomplish. We gain then the impression that the child is not yet psychologically ready for sphincter control when such demands are made upon him.*

The foregoing considerations may also help us in understanding the negativism that comes to a height in many children around this age. Negativism seems to be the child's manner of coping with situations beyond his psychological ability, and of letting the adults know that some of the specific demands they make upon him are beyond his comprehension and ability.† It is understandable that in an organism in which the boundaries are so permeable, the negativistic response to inner tension will spread throughout the system so that even in areas where the child has developed some ability to respond adequately a "primitivation" [1] of inner organization and consequent regression of behavior may occur.

The perseveration of the response to the first card has its parallel in the repetition of stories which the child enjoys. Reinforcement theory would interpret this aspect of the test behavior as the reinforcement of the successful response, which brings about the reward (approval) and need-reduction (the narcissistic need). Although this might account for the immediate test behavior, it would not explain the perseveration of an entirely different concept on subsequent administration of the test. From a psychoanalytic point of view, this behavior represents attempts at active mastery of a situation that is fraught with some anxiety. This anxiety is most likely generated by the fear of loss of love (approval); the child fears that the response might not be approved and fears the consequent loss of self-esteem. The repetition of the successful stimulus has then the significance of "I don't have to feel anxiety. I am able to do something to avoid it." The pleasure that accompanies the successful response is derived

* This does not mean that a child of two or three years of age cannot be toilet trained. Many children actually are. But, usually, this is accomplished by conditioning, using punishment or the threat of punishment as an unconditioned stimulus. What this reflexological accomplishment does to the developing ego is a different story. We are concerned here with psychological, not with reflexological problems.

† This statement is not to imply that this is the only source from which negativism springs. There are many others, not the least of which is the emerging self assertiveness of the child.

from two major sources. First, from the gratification of the narcissistic needs. Secondly, "functional pleasure" brought about by successfully mastering a situation potentially laden with anxiety.

It might be assumed that the child does actually respond to each of the ten cards but does not perceive the differences because his perceptual field is still too unstructured. Children at this age level give frequent evidence of taking similarities for identities, as the psychoanalysts have described it.

The Confabulation (Age Three to Five)

In confabulation, the child gives a different response to each card, or to many cards. In each case the concept the child produces agrees in a single aspect with a single aspect of the shape of the blot; the rest of the blot does not fit the shape of the concept at all. The child has undergone considerable development from the previous level of functioning. He now reacts discriminately to the cards themselves; moreover, he is able to come to grips with some reality aspects of the blot, identifying a part of the blot and adequately relating it to a part of his concept or image. He apparently understands more clearly what is expected of him and copes with the expectation in a much more adequate manner. This development of the mastery function appears to go hand in hand with the development of reality orientation and testing. Reaction no longer follows discharge as closely. Instead, there is an inhibition of immediate reaction as well as some inhibition of the movement to the level of unreality, where the demand may be gratified on a wish-fulfilling basis. There is now some selection of images or concepts, the consideration of alternatives, and the judgment of similarity between the shape of the blot and the shape of the concept.

The boundary between the levels of reality and unreality is still highly permeable. The child, having recognized that a part of the blot fits a part of his image or concept, now moves ahead and identifies the shape of the rest of the blot with the shape of the rest of the image, without testing whether this is an appropriate match. What

is begun on the level of reality is completed on the level of unreality. While the child has learned to postpone immediate reaction and gratification to some extent, his ideation is still largely governed by the pleasure principle, even though the reality principle has begun to operate in a significant way.

The emphasis on the single characteristic in the confabulation response in the Rorschach is typical for the thought processes of the child. It seems to be an illustration of what psychoanalysts have described as the *pars pro toto* type of ideation—the part is taken for the whole. As a form of archaic thinking, it has also been observed in dreams, fantasies, and free associations of the adult. Storch observes:

These examples show the movements in accordance with which the formation of ideas at primitive levels is oriented; especially impressive perceptual characteristics are the main guides in their construction. As the cognition of relations, similarity and difference, etc., is as yet wholly undeveloped, the child may include under an idea things having only vague external resemblance of appearance, provided they have some one impressive feature in common; if the child has been impressed by the power of movement as the principle characteristic of an animal, he may regard a clock as an animal because of the motion to and fro of the pendulum. [16, pages 9–10]

From the foregoing it can be adduced that the *pars pro toto* type of perception is merely a special instance of the more general trend to take similarities as identities. This is quite clear from the child's Rorschach behavior where two objects, the blot and the conceptual image, are adjudged identical because they are similar in one aspect.

A parallel to the Rorschach behavior of the child is found in the observation of Piaget [14] that, on the prelogical or preoperational level of functioning, the child's thought is characteristically *centered*. Attention is always focussed on a single aspect or group of aspects; and the child finds it impossible to keep several aspects or relations in mind simultaneously, which alone makes genuine conceptual or logical operations possible.

Storch's example as well as the child's Rorschach behavior highlight the concrete-mindedness of the child and the syncretistic mode of his operations. He finds it impossible to view motion as an abstract quality, or to visualize cat whiskers by themselves. He does not

classify along categorical dimensions but on the basis of belongingness of characteristic and object. There is no such class as "whiskers"; there is only the object "cat" which has whiskers; consequently, everything with whiskers is a cat.

A highly affective component can be observed in this type of classification. Storch calls attention to the "impressive perceptual characteristic" that is used as a basis for this prelogical generalization. By *impressive* we understand here an affective loading. This is important in that it illustrates that affective and intellectual schemata of perception and ideation are still largely undifferentiated. For that reason the confabulation, as found in children, is probably not a pure form response, nor is it anything else; it most likely predates the differential awareness for form and other aspects of the blot. An inference from this is that the examiner should have a difficult time eliciting from the child such terms as form and shape in the inquiry.

Thus it may be said that the confabulation pattern of generalizing from the part to the whole is a function of the sparsely differentiated inner world of the child at this age level, the fluidity of the inner organization, the limited ability to postpone gratification, and of need-dominance in perception.

The Confabulatory Combination (Age Four to Six)

Confabulatory combination may be illustrated by the following example: The child responds to Card I with the concept "cat." When asked for specifications, the child designates the upper side *d* as ears, the four inner white spaces as four eyes, and the bottom *d* as the tip of the nose or a tongue. He then proceeds to point to the entire center and calls it a body, points again to the side *d*'s and designates them as legs, and then goes on to call the bottom *d* a tail.

The first striking aspect of the response is the wealth of detail and the careful match of the shape of each of these details with the shape of the blot material. While at the previous stage the "whiskers" on Card VI were sufficient for the child to define the concept as a "cat," he now differentiates many more details as necessary for his concept.

His perceptual field has undergone a great deal of structuralization and differentiation, which are reflected in the manner in which he perceives the details of the blot, its inner articulations, and its outer projections. Moreover, this increased differentiation of the perceptual field has become introjected and the conceptual realm has also undergone a great deal of differentiation and structuralization. This is reflected in the manner in which the concept "cat" is now articulated and specified. This tremendous increase in the differentiation of the conceptual realm and the perceptual ability of observation within the span of a year gives some idea of the rapidity of growth at certain times.

To understand this development, it may be helpful to consider the growth process, as Piaget [10, 11, 14, 15] does, as involving two related but not necessarily correlated processes of *assimilation* and *accommodation* which, conjointly, bring about adaptation. By assimilation, he seems to mean the introjection and incorporation of objects and relationships of the external world and their modification, including distortion, by the pre-existent inner schema of the child and his needs. By accommodation, Piaget seems to understand the process of the modification of the organism in accordance with the conditions in the outer world. Proper adaptation takes place when the processes of assimilation and accommodation are in equilibrium. The concept of accommodation seems to us to subsume the functions of mastery and reality orientation, while adaptation seems to be the *sine qua non* of reality testing.

In the earlier stages of magic-wand perseveration and confabulation, the process of assimilation seems to be predominant. It shows itself in the manner in which the child modifies and distorts the blot material to suit his inner schemas and needs. On the other hand, accommodation to the requirements set by the examiner and the task are fulfilled only to a minimal extent.

At the present stage of development (that represented by the confabulatory combination) the process of accommodation seems to predominate. In the first place, we observe a much more highly developed form of mastery. The child is now able to cope with the request of the examiner in a specific manner and is capable of dealing

with the material in accordance with the instructions given him. Secondly, reality orientation seems to be the predominant interest of the child, as reflected in the careful observation of the articulation of the blot. This is most strikingly illustrated by the use of the concept of a cat with four eyes. Here we see the child elaborate carefully observed characteristics of the blot into an unreal concept. This is an interesting turn of events. While on the preceding levels of development the child distorted the blot material to fit his own inner schemas and needs (distortion is here to be understood in the sense of having ignored and disregarded the properties of the blot) on this level of development the child distorts the image in order to fit the blot. We observe here the tendency of need-dominance in perception giving way to reality orientation and a beginning reality testing. The considerable development of the latter can be gauged from the very careful match between the shape of parts of the blot material and the parts of the concept "cat."

The above illustrations also demonstrate that true equilibrium between the processes of accommodation and assimilation does not as yet exist because the processes are not reversible at this stage—as evidenced, for example, by the distorted concept of the cat. Piaget refers to the relation between the two processes at this level as one of "regulation" rather than equilibrium.

It is of interest to note that there are evidences in the child's social behavior, as well as in the Rorschach, that accommodation is in the ascendancy. Before the age of five, according to Piaget [13], children engage in "collective monologue." While the children seem to converse, their verbalizations are merely accompaniments to their own actions. Each child is really preoccupied with his own thought and activity and does not listen to what the other child has to say. *The terms of their "conversation" are not adapted to one another.* At the age of five, a shift can be noticed; true conversation begins, as well as true collaboration or a true argument. The child may discuss his own activity but includes his interlocutor, or both children may discuss a common activity or memory in such a way that the successive terms of their conversation are adapted to one another.

Another aspect of the child's Rorschach behavior deserves atten-

tion. The child is apparently what Goldstein calls stimulus-bound. In seeing the four white spots, for example, the child feels constrained to use them. He cannot neglect the two extra ones, nor can he make a mouth of them by joining them. It is as if their contiguity in space entails a necessary relation. It is here that the child reveals his inability to abstract, the concrete nature of his thinking, and the syncretic nature of his classificatory schemes.

It is noteworthy how little perturbed the child is about a cat with four eyes and no mouth. It does not even occur to him to offer this as an imaginary cat, apparently, because he sees no reason for objection to such a cat. The observer can note here that the levels of reality and unreality are not as yet fully differentiated when there is no external referent present to which the image can be compared. While then, as mentioned above, on the level of perception the reality and unreality levels are fairly clearly differentiated, this has not yet occurred on the level of "pure thought." This is an illustration of what Piaget [14] calls *shifting*. What has been learned on one level of operation—in this case on the level of perception—is not automatically transferred to the next higher level, that of abstract thought. It has to be learned all over again.* On the level of pure

* The older the child becomes, the more dramatic this phenomenon. A problem that a child of eight can solve with visual and manipulatory aids cannot be solved by the same child on the purely verbal level until he is twelve years old. To quote Piaget:

Thus, the mere fact of thinking an operation instead of actually carrying it out causes circumstances to reappear that had been forgotten long ago on the plane of action. [14, page 214]

This phenomenon has important theoretical consequences for the conceptualization of the growth process, as Piaget points out quite aptly:

This shifting of external experience on to the verbal plane has not always received due attention. To Associationism it is incomprehensible; for if our conscious reasoning were the direct result of previous experiences, then, clearly, once these experiences were over, the individual ought to be able to re-enact them in thought or imagination upon the verbal plane. If, however, the mental experiment which appears at a given moment on the verbal plane is really, as Claparède maintains, due to a failure to adapt to new requirements, it will not be a mere translation of the subject's most recent and most highly evolved external experiments, but will, on the contrary, entail a whole process of learning over again. It is in this sense in which the past is shifted on to the present. The evolution of intelligence is therefore not, as was claimed in the Associationism of Taine and Ribot, continuous, but rhythmical; it seems at times to go back upon itself, it is subject to waves, to interferences, and to "periods" of variable length. [14, pages 214-215]

thought, then, the levels of reality and unreality are almost as undifferentiated in the five-year-old as they were on the plane of perception in the four-year-old.

The next point to take up is the most remarkable aspect of the confabulatory combination: namely, its incompatible organizational features, which contrast so sharply with the good delineation and discrimination of details. Here, it appears, the child reveals the lack of relational, hierarchical organization in his thought processes. The child projects simultaneously a facial view and top view on the same blot, and he is obviously not disturbed by this contradiction. It does not occur to him that a side projection cannot be an ear and a leg simultaneously, or the bottom projection a tongue and a tail, or the center a face and body. Awareness of contradiction, it appears, is not present in the child's thought.

The ability to tolerate contradiction in the Rorschach response is a prototype of the child's behavior in other realms. When the child is asked to draw a face, he will draw the nose in profile position, yet the eyes and mouth in full-face view. He is not aware that the two views are mutually exclusive. Piaget [14] asks a seven-year-old boy why a boat floats. He replies it floats because it is light. Next, he is asked why a big boat floats. The child answers "because it is heavy." Piaget states: "There can be no doubt that up to the age of 7-8, child thought teems with contradictions." [14, page 241] And, after making the observation that there are two types of contradictions, he goes on to say:

The second type of contradiction, on the other hand, strikes us as peculiarly characteristic of child thought. It is what might be called contradiction by "condensation." The child, unable to choose between two contradictory explanations of one and the same phenomenon, agrees to both simultaneously and even fuses them into each other. Nor must it be thought that this is in any way an attempt at synthesis. The child is never in the presence of two terms which are at first conceived separate and then condensed, *faute de mieux*. It is rather a lack of restraint that allows new elements to be constantly heaped on the old ones, regardless of synthesis. [14, page 242]

Here, again, the child reveals the prelogical, syncretic nature of his thinking. The "lack of restraint" of which Piaget speaks is another

way of describing the inability to postpone gratification of impulses. In the five-year-old, the impulsivity has now shifted from the plane of objects to the plane of relations and thought, even though he has learned sufficient impulse control to permit him to orient himself more adequately in reality. Here, again, can be observed the cyclic nature of the process of development, to which Piaget has previously called attention and which has also been observed by Gesell [2].

These observations lead to another aspect of the confusion between two planes of view in the Rorschach response. The child has, apparently, no awareness of the proper nature of spatial relationships—an ordered system of parts that go to make up a whole. The two views of the cat are merely juxtaposed, or superimposed in two-dimensional space, with no apparent understanding of the three-dimensional relationship of these views which alone go to make up the cat. It seems as if he can “see” the parts of the cat and lose the whole cat in the process. Genuine hierarchical organization as found in adults is still absent. The behavioral field of the child shows considerable differentiation along a single dimension but little differentiation along other dimensions. This lack of hierarchical organization prevails throughout the behavior of the child and in areas not related to spatial relations. To take one example from Piaget, a child is given a box of wooden beads, most of which are colored brown, but with a few white ones mixed in. The child between five and seven understands that the brown ones are made of wood and the white ones are made of wood. He is then asked, “Of which are there more, the wooden ones or the brown ones?” The child still invariably answers, “The brown ones.” When asked again about the substance of the beads, he will reaffirm that he understands that both the brown and white ones are made of wood. Nevertheless, he will continue to assert that there are more brown ones than wooden ones. This shows that the child is not able to understand the relationships of exclusion or inclusion, or parts and wholes.

The child reveals the same lack of understanding of relations in his drawings as well as in his language. Here is an example taken from observations of Swiss children [14]. Geneva children are very

familiar with bicycles. When children below the age of seven are asked to draw them, they do it in the following manner. They draw the wheels, the gear, the pedals, and the chain, all in juxtaposition, but they will not show the proper connection between these various parts. In the area of language it has been found that such prepositions as *because* and *since* are almost completely absent from the child's vocabulary; instead, he uses *and* and *then*. That is, the child substitutes juxtaposition for relations. The child's inability to perceive and conceive relationships is not limited to spatial relations, but extends throughout the realm of his behavioral repertoire. Moreover, these independent observations demonstrate that the Rorschach behavior of the child has, indeed, a prototypical character and that there is justification for generalizing findings beyond test behavior.

Another aspect of this response seems noteworthy. The child seems to specify his concept in a matter-of-fact manner; the physiognomic aspect seems to have disappeared from his responses. It would seem that cognitive and affective schemata are no longer fused but have undergone a beginning differentiation. Consequently, one would expect that the child at this age will begin to respond to the more affect-laden stimuli in the card, color and shading, in a somewhat more conscious manner than before. It is therefore of interest to observe that the five-year-old perseverates on the last three colored cards. This is not simply a continuation of the behavior observed in the three-year-old, or it would not be limited to these cards. It is the re-emergence of the old behavior. In the three-year-old, the perseveration is most likely motivated, in part, by the insecurity and anxiety aroused over possible failure in the total task. Consequently, the child repeats the successful response in order to reassure himself; the repetition affords him functional pleasure. In the five-year-old, the task no longer appears to arouse anxiety; he is sure of himself and is therefore able to deal with the material in a matter-of-fact manner. What arouses his anxiety, at this stage, is the beginning of awareness that he must learn to cope with affects and affect-laden situations. Here, again, the phenomenon of shifting can be noted.

What the child has learned on the undifferentiated cognitive-affective level, he must learn again on the newly differentiated affective level.

There is one feature that seems to characterize the Rorschach responses of all children below five years of age: they tend to produce almost exclusively whole responses. The correlate to this is that they do not give usual detail responses. If the basic hypothesis about usual details is correct (namely, that usual detail responses indicate the person's ability to deal with the practical problems of everyday life) it must have significant application to the behavior of children. The inability of the child to put himself in the place of someone else—his essential egocentricity, which Piaget [13, 14] has repeatedly observed in children below the age of seven—may be one of his limitations in dealing with practical problems.

Summary

A survey of the age patterns in the Rorschach indicates that the child seems to undergo rapid growth and maturation between the ages of three and five and that this maturation occurs in a lawful, or at least regular, manner. Relatively speaking, he moves from a need-and-fantasy-oriented mode of ideation at three to a reality-and-object-oriented mode at five years. There is a concomitant increase in the child's ability to cope with situations on the object plane and an increase in self-assurance; likewise, there is an increase in his ability to test reality on the object plane. Striking development in the differentiation of the cognitive and affective schemata can be observed. Also, there is an increasing capacity to postpone immediate gratification of impulses and therefore a progressive shift from the pleasure to the reality principle. Nevertheless, the child still has a long way to go before he achieves the structure of the adult. His thinking is still concrete, syncretistic, and prelogical. He is not yet capable of understanding complex relations and is limited in his awareness of his own mental processes. The level of affectivity is still largely undifferentiated. On the level of "pure thought," there is still

little differentiation between the levels of reality and unreality. Reality testing is still limited and characterized by "regulation" rather than "equilibrium."

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The Development of Perception in the Rorschach

The present study is based on a thesis [30] written under the influence of Gestalt psychology and the genetic psychology of Edouard Claparède and Jean Piaget. The original work has been adapted and completed by more recent investigations [31]. Our aim was not to establish norms for different ages, but to study the basis of the Rorschach test by means of genetic analysis. Many very interesting investigations have, in the meantime, contributed to a clarification of the Rorschach technique by comparing different groups, by varying the experimental situation, by comparing the Rorschach with other tests; but the genetic aspect of the Rorschach determinants has never been thoroughly examined with the aim of making the underlying psychological phenomena more intelligible.

Development is, in quite a general way, *differentiation* * and increasing *complexity* due to the increase of mental capacity. It means, too, growing *flexibility* or decreasing rigidity of mental structures. Regarding this general aspect of mental development, we might more precisely state the problem that guided our investigations in the following manner:

1. How are increase of differentiation, complexity, and flexibility shown in the Rorschach?

* See Volume I, page 531, for a discussion of Murphy's similar theory of the development of perception.

2. Is there a parallel between the order in which certain Rorschach determinants appear during the development and Rorschach's assumptions concerning the diagnostic significance of these determinants? This second question would mean, for instance: Do the determinants which, according to Rorschach, are signs of social adjustment and mental control, appear late in development; and do others, indicating emotional instability and lack of control, characterize the Rorschach reactions of young children?

From this genetic point of view we hoped to find some trends of development and to throw more light on certain aspects of the test. Our study focuses on perception, omitting many considerations of emotional and personality development. Rorschach himself underlined the idea that his experiment was a test of perception, in opposition to his predecessors who had used blots for the examination of imagination. He felt that the formal aspect of the stimuli permitted him to catch typical ways of adaptation to reality.

Though there are so many divergencies in the details of statistical results, it is possible to trace some general trends of mental development in the Rorschach determinants throughout the various studies. There are (1) some Rorschach determinants that increase or decrease more or less regularly with age; and there are (2) some tendencies concerning the total reaction to the test that characterize certain stages of development. Without entering into the particulars of these findings we may sum up briefly the outstanding features of the development:

First: There is general agreement as to the increase in the number of responses (with some reservations as to the regularity of the increase) in the form level, in the number of movement responses, responses based on form and color (*FC*), responses based on clearly differentiated shading (Binder's *F(C)* and Klopfer's *Fc*) of human content, and finally the increase of records presenting all main determinants (form, color, shading, movement) while in the earlier stages the tendency is toward exclusive use of the one or the other determinant (for example, some color responses besides pure form but no movement responses, or some movement tendency but no color).

We generally observe a decrease of perseveration tendency, of color naming (already stopping at about five years of age), of crude color responses. Responses based principally on color but including some form (*CF*) at first show some increase and then tend to diminish in favor of *FC*. Animal movement responses show a development similar to that of *CF*: at first they tend to increase, then their importance diminishes in favor of movement in human figures.

Second: The earliest stage is characterized by a superficial adaptation to the test, implying perseveration in primitive wholes and little attention to details. The influence of color stimuli is weak, and movement does not play any part in the response.

✓ In adolescence, on the contrary, there is an increase of all components: all possibilities of the test seem to be used. There is an enrichment of the manner of approach (more *W*, more *Did* relative to the preceding ages), more color reaction and more movement, and an increase of subjects with rich records (a certain amount of color, movement, and even combinations of them in the same response).

To some extent development in the Rorschach records of different age groups finds a parallel in the results obtained with tachistoscopic exposure of the blots. According to Stein's study [45], shortened exposure time favors undifferentiated wholes and vague shading impressions, while form color responses demand more time for elaboration. The shorter the exposure time, the fewer determinants are employed by the subject. The occurrence of movement, however, does not show a clear relation to exposure time, but it is also rarer in the shortest exposure. (It is most frequent in the intermediate of three different exposure times.) It is possible that, with longer exposures, control can become stronger than spontaneous expression and inhibit to a certain degree the expression of kinesthetic responses.

In the following pages we hope to elaborate some aspects of these general trends.

Subjects and Test Material

The present study is based on relatively small groups, but experience gained with other groups by the Laboratory of Psychology in Paris (Wallon and collaborators [4]) and in clinical work by Bleuler of Zurich [9], has since confirmed our findings.

The main research has been undertaken with the usual Rorschach blots on 210 normal individuals from two years to adult age. The subjects were chosen from personal acquaintances and children of private and public schools in Geneva. (The original work of the author [5] included a group of mentally retarded subjects and one of schizophrenics.) The groups examined in the present study were composed as follows:

- 10 children from 2.4 to 3.6
- 20 children from 3.6 to 5
- 20 children from 5 to 6
- 20 children from 6 to 7
- 20 children from 7 to 8
- 20 children from 8 to 9
- 20 children from 9 to 10
- ✓ 20 children from 10 to 13
- ✓ 20 children from 13 to 15
- 20 adults—Group I of little education
- 20 adults—Group II of high education

Both sexes were represented in approximately the same numbers. In addition to the Rorschach material, we employed a series of special figures in order to analyze some aspects of the Rorschach reactions more clearly. These aspects are: (1) the tendency to see the material in a global way or in detail; (2) the tendency to see human or non-human concepts; (3) the tendency to see something in motion. These figures, however, were not correlated to the Rorschach material in presenting them to the same subjects, but only served to isolate more distinctly some Rorschach determinants.

Perceptual Development in Reactions to the Ambiguous Figures

Development of the "Manner of Approach" in Ambiguous Figures (*W* or *D*)

Our material is intended to test the tendency to see a whole or parts. We tried to compose figures that might suggest *W* or *D*, if possible in the same degree. We did not correlate these figures to each other, but it appeared that they reflected, on the whole, the dominant tendency of the subject, though some suggested *W* more easily than others. The subject was asked to take the card with the design (Figure 1, I-VI) and to tell what he could see: (1) "What is it? Tell me everything you can see." In the majority of cases we continued after the first answer: (2) "Look at it closely. What else can you see?" And if the alternative had not been found, we tried to give a hint: "And the single parts?" or "And the whole?" For the interpretation of the results we have counted only the answers obtained at (1) and (2) because our inquiry had only gradually been systematized and on the other hand, we did not want to complicate the numerous experiments by all the nuances resulting from our suggestions. In the majority of cases the subjects got the intended meaning of the picture; we have not taken into account some divergencies of contents, but only the factors Whole or Part. Table 1 (page 110) presents the results obtained with 134 subjects.

Here are some examples of responses representing various stages of reaction:

E——(age 3.6)

Figure 1, I (Several fruits forming a person on bicycle). "Bicycle."
(What else?) "It is not a bicycle, there is a wheel."

Figure 1, II (Three beings, half man, half animal, forming an armchair). "Armchair."

Figure 1, III (Two persons lying head to head, foot to foot, forming a sort of figure). "That is a train, that is an ogre."



FIGURE 1 Six ambiguous figures used to suggest W or D: Top left, I; top right, II; center left, III; center right, IV; bottom left, V; bottom right, VI. The six figures were shown to the subject one at a time, not all on one sheet.

TABLE 1 *Responses to the Ambiguous Figures (Six Figures)*

AGES	NUMBER OF SUBJECTS	SUBJECTS HAVING GIVEN		ΣW	W	ΣD	D	TRANSITIONS *		$\Sigma(W + D)$	
		ONLY W									
3-5	16	6	76	80.0%	† 10	10.5%	† 6	6.3%	† 3	3.2%	†
5-6	19	2	76	66.6	19	16.6	13	11.4	4	3.5	
6-7	19	1	52	47.4	24	21.0	18	15.8	18	15.8	
7-8	20	1	44	36.7	29	24.1	23	19.3	23	19.3	
8-9	18	1	33	30.6	30	28.0	24	23.1	23	21.3	
9-10	17	1	16	15.7	30	29.4	17	16.6	33	32.3	
10-15	13	1	8	10.3	25	32.0	10	12.8	35	44.8	
Adults	16	1	2	2.1	14	14.6	3	3.1	77	80.0	

* This column contains all forms of transition between simple (D or W) and complete ($W + D$) perception. Examples: I. "Bicycle there I see a leaf." II. "A bed, a monkey on it." III. "There is a moon, there I see small feet." IV. "Man, he has a flower like a hat." V. "Teapot, an arm" (in V transitions are rare). VI. "Man with bobbin on his head." The succession of W and D has not been considered.

† The percentages are calculated on the basis of the sum of responses given by the group.

Figure 1, IV (Fruits forming a person on skis). "Little boy, that is a mouse." (The profile of the person being rather pointed, this may have influenced the response.)

Figure 1, V (Two beings, one with an arm bent, the other with one arm stretched, forming together a sort of teapot). "Pot."

Figure 1, VI (A figure composed of scissors, a bobbin, and thread). "A man . . . a bobbin on his head." W transition to D .

D ——(age 5)

Fig. 1, I. "Cherries, strawberries." (The apples are not recognized but we have scored this type of response D .)

Figure 1, II. "An elephant, there are lions." D

Figure 1, III. "Man." (Means: Figure of . . .) D

Figure 1, IV. "Cherries, lady." (Cherries form hands.) W

Transitional analysis.

Figure 1, V. "Teapot." W

Figure 1, VI. "Man." (Means: Figure of . . .) W

C——(age 7.6)

- Figure 1, I. "Cherries, leaves." D
 Figure 1, II. "Armchair." (And that?) "That is an arm- W
 chair with a man above." (The *D* after inquiry has not
 been scored, according to our scoring system.)
 Figure 1, III. "Figure with something like a person on it—
 a lady with the moon."
 Figure 1, IV. "Man." (What is he made of?) "Of wood." W
 Figure 1, V. "Teapot." W
 Figure 1, VI. "Basket with needlework, scissors, bobbin— D—W
 that is a head." (on both sides)

J——(age 9.5)

- Figure 1, I. "Fruit." (What else?) . . . D
 Figure 1, II. "Bed or armchair." W
 Figure 1, III. "Figure. Then a doll."
 Figure 1, IV. "Fruits." (What else?) . . . (The whole?) D
 "Don't know."
 Figure 1, V. "Two little dogs." D
 Figure 1, VI. "Bobbin, thread, scissors. There is a thread all D—W
 around—a figure."

G——(age 12)

- Figure 1, I. "Cherries, prunes." (What else?) "A little cy- D (W)
 clist."
 Figure 1, II. "Couch—a man, two cats." W—D
 Figure 1, III. "A head, there a man, underneath also a W—D
 man."
 Figure 1, IV. "A man who is skiing, there are two strawber- W—D
 ries, cherries, fruit."
 Figure 1, V. "Two monkeys—they make a teapot." D—W
 Figure 1, VI. "A man's head, bobbin with thread, scissors." W—D

In spite of the small number of subjects tested, there is evidence of development in the sense from *W* to *D* and from *D* to *W + D*. That

is, we have an illustration of Renan's law of mental development, which Claparède [10] has formulated with regard to perception in the following manner:

1. General and confused perception of the whole (syncretic perception).
2. Distinct and analytic perception of the parts.
3. Synthetic recomposition of the whole with awareness of the parts.

For comparison with the situation in the Rorschach, it will be necessary to differentiate this development in our figures a little more. Between the real analysis of the whole into its main parts there is a transitional stage: globalization with a beginning of analysis. This appears in the pattern: "A man with a bobbin on his head" (Figure 1, VI). This form of transition belongs to the first level and disappears at about nine years, while another appears later and is related to a more analytic restriction of perception. Here the subject recognizes parts of the figure (for example, as fruit) while he sees in the rest the person, "A man skiing." But he does not notice either that the fruit can be perceived as part of the person or that the person itself is made up of fruit. Often his relative restriction of perception disappears after a moment of relaxation.

Let us return to the first level, where the *W* is prevalent. Why does development of perception start by globalization? From the functional point of view, we may say that globalization corresponds to the most important form of perceptive adaptation: in real life it is, first of all, necessary to see objects (configural entities without their surroundings or their context), and it is not immediately necessary to analyze the object in its parts. Global perception corresponds to our first orientation in the world. Our figures show very well that this primitive pattern of perception is in some ways very successful, as it is not encumbered by details which during the next stage tend to handicap the view of the outlines.

It is interesting to see that the shift from global to analytic dominance occurs at about six or seven years—that is, at the time when the child is ready for school. It is the age when the "intuitive" but

superficial adaptation makes room for a more analytic elaboration of the objects and facts.

Rigidity and Plasticity (Flexibility) of Structures in Reactions to the Ambiguous Figures

Thus far we have followed the development by marking the main steps: $W \rightarrow D \rightarrow (W + D)$, but we have not yet analyzed the growing complexity of the resulting structures. What does it mean when the subject is able to realize that there is a head but that this head can also be looked upon as a tailor's tools? That it "is made" of such tools? It is not only an articulated concept of a whole and its parts (which would also be $W + D$) but it means that a first structure can be broken up and recognized within a new one ("Umzentrierung," as Wertheimer has called it). This restructuring can appear immediately after the first impression, or practically simultaneously with it, or it may occur only after a moment of concentration accompanied by the "Aha-Erlebnis" (K. Bühler).

We are dealing here with a factor that is common to intellectual and to perceptual processes: in Thurstone's terminology it is called "flexibility." For Meili it is one of the four factors that determine all intellectual processes, the factor of plasticity [29].

The rigidity (the negative term of this determinant) of children's perception can also be described as a limitation of their attention, as W. Stern has already mentioned: "The more the child recognizes the entities, the less he recognizes the parts." [46, page 167]

The same child, finding out at once that Figure 1, I "is" a man on a bicycle, may not be able to see this at a later age, as he is then absorbed by his interest in details. We have a very similar phenomenon in the development of drawing, where each new step tends to be attained by some loss of the total structure or of certain details. (See also Loewenfeld [27].)

From our second analysis we may now conclude that the development from syncretic W to analysis and synthesis is based on the growing flexibility of perception, or—more generally speaking—of mind.

It is obvious that this general factor plays a part in Rorschach reactions, because every new response demands a restructuring. We

shall see that in the stage of extreme syncretic globalization, the Rorschach shows strong perseveration—that is, lack of readaptation, of reorganization. But we shall see also that the factor of flexibility can be observed in the Rorschach in a very similar manner as in our material, though less distinctly in the frequency of multiple responses to the same configuration seen in different ways. (See below, pages 143–148.)

Perception and Reasoning (Condensations and Logical Comprehension of Relations)

In the case where the child says of Figure 1, II: "This is an armchair, nothing else," it is evident, unless further inquiry contradicts this statement, that the lack of plasticity is a matter of perception. But there are transitional patterns of responses, where the perception as such is flexible enough to embrace both aspects, *W* and *D*, but where the lack of comprehension of the logical relations handicaps the full understanding of the figure. Thus Figure 1, II (an armchair formed by three indefinite shapes) is often called by children ". . . an armchair . . . there is a monkey on it." The first response, "armchair," is related to the whole; the second concerns the upper part of the figure. The child does not make the logical differentiation or the alternative: "The back can be a monkey," or "It is an armchair, but the back might be a monkey." On further inquiry about this concept, the child usually gets confused, thinking he was wrong with one or the other response. This is also shown by the response to Figure 1, III, "A moon and a lady above." The upper half, being recognized as a detail, is integrated into the whole in a rather illogical and unrealistic manner, which does not seem problematic to the child. For Figure 1, VI, we obtained the ingenious response: "A man, somebody has smashed scissors on his face."

These examples illustrate very clearly what Freud called "condensation" in his theory of dreams and what Rorschach defined as "contamination"—that is, the illogical combinations of two or more ideas, which are typical of schizophrenic thinking in adults. The reader might recall the famous example given on Card IV of the Rorschach—"Liver of a solidly living politician"—as a contamina-

tion of the impression of a liver and of a man sitting on a chair. Contaminations or condensations manifest the tendency to follow directly and without reference to reality the course of inner ideas and impressions.

It is interesting to note that at the age where Piaget finds the beginning of reversible mental structures (about eight), condensations of the pattern described never occur in our subjects.

From the point of view of reasoning we might say that perception and thinking are narrowly connected, in the sense that insufficient logical comprehension handicaps the efficiency of perceptive structuration. According to Piaget's conception of egocentrism:

. . . we may say . . . not exactly that egocentrism of thought implies the narrowness of the field of attention, but that egocentrism, and therefore schematicism of attention, are correlated: they both derive from the primitive mode of thinking which consists of the habit of taking one's immediate perception as absolute, and both imply the incapacity of managing logical relations. [34, page 292]

Conclusions from the Ambiguous Figure Experiment

1. The development toward the differentiation of configural data is characterized by three main stages: (a) globalization (syncretism); (b) analysis; (c) synthesis [$IV \rightarrow D \rightarrow (IV + D)$]. Between the main steps we can distinguish intermediate forms. Therefore, before being able to conceive an object from different aspects and to analyze its structure, perception must have passed through two stages, each of which represents a stage of adaptation to reality. In the first step, characteristic of which is superficial global perception, the subject grasps the outlines of the stimulus material. In the second stage, whose character is analytic, he attains a better knowledge of details—a progress, however, bought at the cost of neglecting the global outline. Only after these stages is the perception wide and penetrating enough to take in whole and part without loss of one or the other aspect.
2. This development can be considered as the manifestation of increasing flexibility or plasticity of mental structures.
3. The transitional forms of responding to the ambiguous figures

often appear as condensations (contaminations). The neglect of logical relations (non-comprehension of logical inclusion or alternative) contributes to the primitivity of perception.

4. From the aspect of the attitude of the subject towards the stimulus, we can distinguish three corresponding stages:
 - a. The subject remains distant with regard to the stimulus; he does not penetrate into the data; attitude of superficial adoption of a global approach.
 - b. The subject seems absorbed by the material which he tries to analyze; attitude of searching, handicapping the perception of the whole: detail approach.
 - c. The subject scrutinizes the data in detail without losing the view of the whole; attitude of uniting distance and penetration, emphasizing either whole or detail: synthetic approach.

We now propose to examine the Rorschach reactions, guided by our preliminary findings. First, however, it will be necessary to investigate more precisely the special conditions that explain why these developmental trends cannot appear as clearly in Rorschach reactions as in the reactions to the special figures.

Perceptual Development in Rorschach Reactions

Differences between the Ambiguous Figures and the Ink Blots

What are the differences between the two types of material?

1. In the ambiguous figures each configurational entity has a more or less determined meaning; children as well as adults easily see what the whole or the parts are meant to represent. Except for the pink animals in Card VIII, there is in the Rorschach no part or whole that attains such popularity of perception as our figures (which have been especially designed for that purpose). The specific contents of our figures can be overlooked for this discussion.

- a. In the Rorschach, each blot may be articulated in several ways (of course, not all in the same degree—Card V, for example, less than others). In Card I, the blot may be seen as a winged whole,

as a composition of three principal parts, and so on; Card II may be interpreted as a black shape around a white space in the center, or immediately as its two halves, or even as a pointed object directed upwards.

b. In the Rorschach the articulation of each whole in different parts follows Gestalt principles of "good form," but leaves some liberty to individual conception.

2. Each one of the configurations can lead to different concepts according to the individual elaboration of the shape and to the inner images of the subject. For instance, the division of the blots in Card II can lead to responses like these: two bears, two men, two heads of dogs.

3. In the ambiguous figures practically every configuration the subject perceives suggests a specific content. In the Rorschach the subject might well see some shape without being able to associate a meaningful concept with it. As the examiner usually takes account only of those perceptions that suggest a meaning, some *W* or *D* perceptions that do not produce a response, do not enter the record.

4. In the Rorschach blot series there is much more opportunity for analytic perception than in our material, where the chance of *W* or *D* is fairly equal. In our figures *D* are always parts of *W*, while in the Rorschach all detached or differently colored blot-areas easily form individual entities.

5. In our set of figures each configuration has its particular character and can be understood by the youngest subjects, while the ambiguous character of the Rorschach blots and their similarity as to symmetry and arrangement on the cards permit the transposition of one impression to all or at least several cards. We found in our tests no perseveration phenomena, while in the Rorschach these always occur in early childhood.

All these differences combined with the main one—the distinct outlines in our set of figures, without either shading or color, versus the ambiguous blots with shading and color in the Rorschach—account for the fact that in the Rorschach the development will not be seen so clearly as in our preliminary research.

Development of the Manner of Approach

Our findings show that in the Rorschach, too, the youngest children react more often to the whole than do the older ones. Though some authors indicate lower averages for the first stages (Ford [15], Ames *et al* [1]) than others (Klopfer and Margulies [21]), they all agree about the decrease of *W* from the first stages (two-four years) during preschool age. The individual differences between one investigation and another may be explained by the difficulty of scoring young children's responses. Sometimes, during the inquiry, the child will point at a certain detail; another time he will tap on several parts to indicate the whole in a rather arbitrary way. When we observe the child's entire reaction and attitude, it is psychologically correct, in case of doubt, to take his response as global.

After the first stage, characterized by a large amount of *W*, we find a marked increase of *D* between 5 and 7. The percentage of *D* increases at the expense of *W*, which again increases in later childhood and in the adult groups. Though scoring system and norms may differ, other investigators (Ford, Ames, and others) have also observed an increase of small details after the first stage and an increase of *D* and *W* during the later stages.

The parallel of the tendency in development in the Rorschach with that in the preliminary findings outlined above is very obvious when our results are shown in a table of three age groups containing the same number of subjects.

TABLE 2 *Number of W, D, and Dd in the Rorschach Scores* *

AGES	NUMBER OF SUBJECTS	<i>R</i>	<i>W</i>		<i>D</i>		<i>Dd</i> †	
			No.	%	No.	%	No.	%
3.6-7	60	1460	442	30	762	52.6	246	17.4
7-10	60	1481	341	23.2	987	67.3	153	9.5
10-adult	60	1580	464	29.3	983	62.2	133	8.5

* In this table we have not included the youngest or the superior adults, so that we might have the same number in each block.

† This category includes Klopfer's small usual and unusual details. The *S* and *Do* have been included in the category of *D* or *Dd*, depending on their area.

As the first level includes the whole preschool age, the tendency to react to the whole and the primitive analysis (*Dd*) coincide in this table, whereas they appear in successive ages in Table 3.

TABLE 3 *W, D, Dd for Each Age Group*

AGES	<i>R</i>	MED.	<i>W</i> %	<i>W</i> MED.	<i>D</i> %	<i>D</i> MED.	<i>Dd</i> %	<i>Dd</i> MED
2.4-3.6	155	16	48.3	16	46.3	7	5.4	.5
3.6-5	387	19	45.5	10	45.5	12.5	6.2	1
5-6	546	24.5	20.6	5.5	55.7	16	21.5	3
6-8	527	25.5	26.8	8.5	56	15.5	17.2	3
7-8	515	25.5	22	6	72.1	15.5	8.5	2
8-9	425	19	25.6	5.5	62.9	10.5	11.5	1
9-10	551	26.5	18	5	70.6	16.5	11.4	1
10-13	600	25	22.3	5	65.5	16.5	12.2	1.5
13-15	496	22.5	29.7	6.5	60.1	16	9.4	.5
Adults I	484	23	37.8	8	59.7	14.5	2.5	0
Adults II	848	39	24.5	10	62.9	26.5	12.6	1

Primitive Wholes

Before analyzing the primitive wholes we have to describe in a more general way the adaptation of young children to the test.

We have observed, in agreement with others, that young children manifest little eagerness or attention and often display a great deal of agitation in handling the cards. This will help us to understand the perseverations that are so typical for early Rorschach records.

Klopfer and Margulies, and later Ford, have described the different degrees of "Magic Wand Perseveration" (Klopfer) of young children.* This tendency has also been a striking factor in our material. To the three degrees of Magic Wand Perseveration—which according to Klopfer and Margulies disappears at about 6 years—Ford has added a fourth. This degree does not concern reaction to the whole but to certain distinct parts—for example, "butterfly" (*D*)—which may guide the child's reaction in several cards. We also observed this interest in special forms at the age which Ford has called the "perseverated-logic age (5 years)", with this difference: we noticed

* See Chapter 2 of this volume.

principally the interest in certain formal qualities like peaks and holes, which the child picks out in a stereotyped manner with identical responses. This tendency has already been observed in young children with quite different material by the French psychologist Cramausse, who called it the tendency "to go from the same to the same." [11, page 161]

But we can follow a repetition tendency still further, after the perception has already attained a certain degree of flexibility. This pattern of repetition results from a lack of knowledge and not from undifferentiated perception. Some children in our group of 6-7 years very often find "some kind of animal" and describe it each time in a different (that is, a differentiated) manner. Thus, even at this age, we obtained a rather high amount of repetition (22.6 per cent) by counting the percentage of repeated and not repeated answers.

PERCENTAGES OF REPETITION

2.4-3.6 years	43.9%
3.6-5 years	23.5%
5-6 years	32.4%
6-7 years	22.6%

When reacting to the cards as if all were representations of trees, butterflies, or flowers, the little child does the same as some adults do when they say: "This is all symmetrical, all blots resemble each other. . . ." The young child's perception can attain so little articulation that the similarities of the ambiguous configurations are more marked for him than the differences. "When the organism is active, at a high degree of vigilance," to use Sir Henry Head's term, "it will produce good articulation; when it is passive, in a state of low vigilance, it will produce uniformity." [23, page 173] But weak articulation does not only produce perseveration from one blot to the other; it manifests itself in specific (syncretic) forms. In analyzing the different patterns of primitive wholes we take into account only those that clearly distinguish the lowest and the highest stage, leaving aside the responses (for example, the popular *W*) that occur at any level.

In the literature on children's Rorschach reactions one can find a sort of *W* called "arbitrary *W*" in which concept and configuration completely lack correspondence. We did not encounter this pattern as a real response, but as a consequence of complete inattention or embarrassment. Generally we found that even the youngest child reacted to some configural quality of the blot.

The Blot as Seen as a "Figure on Ground"

Let us quote Koffka's description of the genesis of form: "The first phenomena are qualities of figures on their ground. . . . They are simple structures—the phenomenological data are based on a certain quality and on the ground on which it appears." [22, page 100] Of course, the child does not express himself like the schizophrenic patient who answered to Card V "something which is spread out," before she was able to associate this spread thing to a bat. But there are responses where the determinant form seems nearly absent and nothing but the fact of the black or colored surface on the white ground determines the association. Card IV, by its compact form, gives us the best illustrations of this kind of response—"image," "door, curtain," perhaps also "coat"—responses that have been suggested by the card itself and are not due to perseverations from former cards. These examples have been given by our 10 youngest subjects whose other *W* responses to Card IV were "tree" (4 children), "bird," "dog," "wolf" (perseveration from previous cards). In addition to these 11 *W* responses, the children in the first age group gave only 3 *D* responses.

Quite apart from these responses showing the "figure on ground" rather distinctly, we may consider the whole of the perseverations from the following point of view: After the child has been reminded of a tree or an animal in one card, the mere fact that the next blot is also spread on the white paper is sufficient for him to perceive it as the same concept. So we can often reduce "magic wand perseveration" to the magic of a figure (symmetrical) on a ground being ambiguous enough to fit easily many concepts.

Vague W's Based on Shading and White Space

This kind of *W* corresponds to Binder's *Hd* [5] without emotional character, to Klopfer's *KF* or *cF* [20] * and to Rickers-Ovsiankina's [37] and to Rapaport's [35] vague *W* observed in schizophrenic Rorschachs. Here it is not so much the figure on the ground that impresses the child but its surface with the shading. The striking number of nature responses in young children's records, already mentioned by Sunne [47], can be explained by the one-sided attention to the determinant of shading and the corresponding association with some ambiguous object like rock, mountain, or clouds. But association of an ambiguous surface with the concept of an object that is similarly vaguely structured already shows a certain degree of selection. For this reason, and certainly because of the narrowness of their ideation, the youngest children of our first group do not yet give vague *W*. From 5 to 10 years we notice a marked decrease of this class of *W*. It is interesting to compare this development with that of another pattern of shading, which represents the higher levels of elaboration (Klopfer's *FK* and *Fc*). There, we find just the opposite development, a regular increase. See Tables 4 and 5.

Schematic W's Based on the Outline of the Blot

This category of globalization is perhaps the most important in daily life. We saw its nature in the manner of perceiving our ambiguous figures: our youngest subjects were able to recognize the meaning of the total image, like the cyclist or the teapot, whereas the older children more often saw only the details, like fruit or animals.

In the Rorschach this pattern of syncretic approach involves schematic forms which are of the same nature as schematic drawings or some forms of modern art. Being entirely directed toward the essential feature of the material, the child may sometimes grasp rather surprising forms. There are schematic wholes that seem primitive in the sense that they lack critical evaluation of the material, while

* Binder's and Klopfer's classifications of shadings do not show exact agreement; but as the differences do not affect our analysis, we will not discuss them here. The distinctions made in our tables are based on Binder's system of shading classification.

TABLE 4 *Comparison of Development of Vague W's with Development of Differentiated Shading Responses*

AGES	VAGUE W's (W BASED ON THE GREY, SOMETIMES INCLUDING S— "MOUNTAINS," "ROCKS," "HOUSE")		FHd (BINDER) FK AND Fc (KLOPFER) (RESPONSES BASED ON FORM AND SHADING— "FUR," "NIGHTBIRD")	
3.6-5		11		0
5-6		28		0
6-7		13		1
7-8		10		6
8-9		5		13
9-10		4		11
10-13		4		17
13-15		0 *		21
Adults I		0 *		41
Adults II		0 *		52

* The content "mountain" occurs in these groups in D or even Dd but not as a vague W.

TABLE 5 *The Results of Table 4 with Subjects Combined into Larger Age Groups*

AGE	VAGUE W's	FHd OR (FK + Fc)
3.6-7	55	1
7-10	19	30
10-Adults I	4	79

others are successful abstractions. The "tree" (Christmas tree usually) on Card I is of a style not very convincing for adults, while "boat" on Card VIII or "flower" on IX and X, if not simply perseverated, are rather successful impressionistic abstractions. Table 6 shows some typical schematizations appearing on Card VII. Which quality of form is it that has influenced these responses?

1. The curved outline which finds its expression in the response "around."

2. The symmetry and bilateral composition, as it appears in the response "scales."

3. The assembly of the six main parts resulting in the responses "chain," "bracelet," "stones."

The outstanding feature of these *W*'s can also be observed in schizophrenic answers. One of our clinical subjects said of the same card: "Drawing of something which is going to be assembled . . . something like a bacillus."

It is interesting to observe the enrichment of these schematic wholes in later stages. We find after the age of 8 these responses to Card VII: "dressed hair," "pot-stand," "sort of cactus"—responses also influenced by symmetry but always associated with other qualities of the total stimulus, that is, the qualities of form, color, or shading.

TABLE 6 *Schematic W's Perceived in Card VII
by Children of Different Ages*

AGES	SCHEMATIC <i>W</i> 's FOR CARD VII
2.4-3.6	Chain, bracelet, ship
3.6-5	Circle, balloon, bracelet, U (letter)
5-6	Balance, V table
6-7 *	U (4 times, school beginners), string

* After this age this type of *W* appeared only twice ("chain"), at 9 and at 11 years.

The youngest and oldest subjects tend to give more schematic *W*'s than the groups in between. The reason lies in the fact that with increasing age, the children shift from the inarticulate global approach to an analytic interest in details. In our more imaginative adults (Group II) we find, however, a return of stylized concepts combined, of course, with other more complex structures. (See Table 7.)

This pattern of global perception seems to be typical of the normal child, while mentally deficient children tend to cling to fragmentary forms. Thus Volkelt [51, 52] and his pupils have observed that retarded children manifest a striking difficulty in copying simple figures with construction toys (discs and sticks). These findings have a parallel in the observations with the Bender Gestalt Test and in the incoherent spontaneous drawings of the mentally deficient.

TABLE 7 *Schematic W's Appearing in the Records of the Youngest Subjects and Reappearing in the Highest Groups*

CARDS:	I	IV	VII	VIII	IX	X
AGES	LEAF	LEAF, FLOWER	STONES, ASSEMBLED OBJECTS	BOAT, LANDSCAPE, GEOGRAPHY PICTURE	LEAF, FLOWER	VASE V IRIS
3.6-5	1	2	4	2	2	1 3
5-6	0	1	2	1	0	1 0
6-7	0	0	0	2	0	0 0
7-8	0	0	0	0	0	0 0
8-9	0	0	0	0	1	0 1
9-10	0	0	0	1	0	0 0
10-13	0	2	0	0	0	1 0
13-15	0	1	1	1	0	1 0
Adults I	0	3	1	4	1	2 1
Adults II	4	1	1	7	1	1 3

The lack of global perception, without the specification of the *W* pattern, has been noticed by all investigators of Rorschach in the feeble-minded (Loosli-Usteri [28], Beck [3], and others).

Confusion of Part and Whole (Confabulated W, DW)

One of the difficulties of scoring children's responses is connected with this type of perception: sometimes the outline of a blot does not especially retain the attention of the child or remind him of anything. As a result his perception shifts to some detail, which attracts him by its marked form or position in the whole. But instead of isolating this part and interpreting it individually, the child still reacts to the whole. The difficulty of isolating details or entire objects out of their contexts is one of the aspects of syncretism. In the field of thinking and concept formation this pattern plays a great part and has been described as the principle of "pars pro toto" by Levy-Brühl [25] and H. Werner [53]. In the Rorschach we have a very typical example in Card VI; we can find in the youngest records the response "cat" for the whole, though it is quite evident that this idea

is based on a very small part of the whole, the whiskers of the upper central part.

In daily life spontaneous observations often give evidence of this mode of perception. So our 5-year-old boy, looking at the picture of a soup dish, an advertisement of a soup manufacturer, said: "She is beautiful." When I asked him: "Who is beautiful?" he answered, very surprised at my question: "The princess!" Asked where he saw



FIGURE 2

Sketch of the soup-tureen picture perceived as a "princess."

her, he indicated with his finger the crown above the tureen and the handles (the arms). (See Figure 2.) The child had organized his concept entirely around the most prominent detail, the crown, neglecting the other elements in their realistic meaning. Using a similar misunderstanding of a picture representing (in the impressionist style) a church tower above some trees, we asked children from 4 to 11 to interpret Figure 3 (page 127). Table 8 shows the results.

TABLE 8 *Interpretation of the Picture "Tower Man"*

	AGES	"MAN"	"TOWER"	BOTH ASPECTS
36 children	4-7	15 = 40%	21	—
34 children	8-11	8 = 24%	13	13



FIGURE 3 *Ambiguous figure: "tower-man."*

In this picture the child's attention is captivated by the pointed cap and the eye, so that the rest is seen in line with these details.

Table 9 shows some of the typical generalizations of this pattern as it appears in the Rorschach reactions. Sometimes it is rather difficult and artificial to score *D* or *W*, because in one case it may be determined by a detail (white space — window of a house), in another by the structure of the surface (shading in the response "house"). But in others the distinction is quite clear, as in the response "rabbit" to Card V, where the two wings could not suggest this concept.

The tendency of the young child to generalize from the part toward the whole manifests itself also in another sense. Instead of saying "This is a head of an animal" (the whole), he will say "This is an animal." During an inquiry he may limit his impression to *Ad*

TABLE 9 *Typical Generalizations from Part to Whole*

	CARD: I		V	VI		VII		VIII	IX	X
	Tree (center, bottom) House, tunnel, animal, man (holes as window, eyes, mouth...)		Dog, horse (center)	Butterfly (upper part)	Tree (upper and central part)	Bridge (center bottom)	Devil (top projections)	Mountain, tree (grey peak)	Tree, meadow (green part)	Tree (upper center)
AGES										
2.4-3.6	1	1	1	2	4	2	0	2	4	2
3.6-5	4	6	8	7	4	2	2	2	0	0
5-6	0	0	7 (3)	6	2	1	0	0	0	0
6-7	0	0	4 (1)	4	3	0	0	0	0	0
7-8	0	0	1	4	1	0	0	0	0	0
8-9	1	0	1 (1)	3	0	0	0	0	0	0

or he may confabulate and insist on the correctness of his first response.

Some of the answers obtained from the youngest subjects appear more clearly at a higher level. Instead of the simple "house" on Card I, we find, for example, at 8 years the response "something Chinese" (probably associated with pagoda), which involves the differentiated observation of the outline, together with some consideration of the inner structure of the blot, similar to the response of a 13-year-old boy: "castle with vault."

The responses "dog," "wolf," and the like, given to Card I, now become "head of a dog," and so on. The white spaces are perceived as eyes or nose, the lateral upper projections as ears, the central bottom part as mouth. From here the interpretation "mask" takes its perceptive origin.

When we find this pattern in records of adolescents or of adults, it may have the symbolic meaning which Kuhn [24] has attributed to it—that is, a tendency to hide one's self. But before giving such an interpretation one should make sure that it is not the expression of a

TABLE 10 *W's that are Characteristic for Grade School Children*

AGES	MASK, HEAD OF ANIMAL
2.4-6	—
6-7	4
7-8	5
8-9	5
9-10	7
10-13	1
13-15	4
Adults I	0
Adults II	2

certain immaturity. In that case, as in others, the general degree of form elaboration would appear to be decisive.

Summary

1. The most primitive response is characterized by the lack of elaboration: the blot is perceived as an expanse on a background. Because of the lack of elaboration of the individual forms, the blot is named by the child in a rather arbitrary way, as any object might fit in with this vague image. In this way we may explain also the tendency to reproduce a first concept throughout the whole series of cards.

In some cases, though, we see a correct association of an object which is not characterized by a definite shape but by its surface and spread, like "curtain."

2. The shading is decisive in interpreting objects that are vague in themselves: "mountain," "clouds."
3. The general outline is cut out in a schematic perception: "circle," "letter U."
4. One of the most common patterns of primitive perception is characterized by the confusion of whole and part, according to the principle of "pars pro toto" (*DW*).

The common feature of all these *W* patterns is the very superficial use of the stimulus material. Any presented object is perceived in such a limited way that the impression is determined either by a

vague whole or by some detail, the meaning of which is overextended. Sometimes the element chosen by the child is an essential part of the object; sometimes it is insignificant. In any case, the children's whole responses manifest their tendency to simplify and schematize, and their incapacity to penetrate into the stimulus material.

The manner in which the young child simplifies is not unknown in adult perception: after-images, tachistoscopic images, bad lighting, and very small figures produce the same phenomena. Forms are simplified; only the main features of the stimulus material are noticed. Incomplete conventional forms tend to appear complete ("circle" on Card VII), some details ("holes") stand out from the rest, and so on.

We believe that practically any *W* seen by abnormal subjects (schizophrenics, organics, and the like) that cannot be scored as a popular response or as a well structured *F* (or *M*) can be classified according to these distinctions of primitive *W*, which have their origin in a regression resulting in the loss of the capacity to analyze.

Primitive Analysis (Primitive *D* or *Dd*)

When dealing with the last type of *W* (*W* based on detail) we already mentioned the attention the young child pays to details, but we only considered cases in which he refers to the whole blot. From the moment when the child isolates this part from the rest, analysis begins to work. We remember the transitional forms of perception in the ambiguous pictures, where the child recognizes some detail in addition to the total image but does not succeed in a real analysis of the main parts. This association of *W* and some small characteristic detail stands out clearly in the many Rorschach reactions where the child passes from a *W* to a *Dd*, often without being able to use the main *D*.

EXAMPLE: R—— (age 5)

Ambiguous Figure 1, VI

Head formed by scissors, thread, and bobbin.

"Man, and this is a bobbin." *W—Dd*, the other details are not recognized.

Rorschach **CARD I**

"Scales." *W*

"Are these men? Their knees." *Dd* (Upper central round detail)

The interdependence of primitive whole and primitive analysis appears in examples of the following type: "This looks like a mountain with the peaks and holes" (Card I). The boy (6.9) continues to indicate several peaks and holes without proceeding to a normal *D*. Or a girl (6.2) about the same card: "There are cocks (central upper round details), ears (lateral projections), stones and holes; this is a rock" (*W*).

We found very similar responses of primitive *W* preceded or followed immediately by *Dd* in schizophrenics,* while the normal adult rarely chooses the succession *W* to *Dd* or the reverse.

The occurrence of *Dd* after the first *W*-stage has been generally observed, though in our material there would seem to be some extreme cases. Our extreme *Dd* types, whom we had personally observed in the kindergarten, were well-developed, cheerful children. They seemed to illustrate the eagerness of the subject at this first analytical stage and the relative blindness for the whole which results from this new and overwhelming interest in detail. Thus N— (age 5) gave 41 *Dd* against 4 *W* and *L*— (same age) gave 19 *Dd* against 0 *W*.

The typical form of *Dd* at this level is very near to form descriptions, as the typical *Dd*'s are very schematic. The child is attracted by certain formal qualities; he picks out peaks, middle line, marked edges, and the like. Table 11 represents some typical *Dd* appearing at about 5 years. The *Dd* indicated in later age groups are generally better elaborated, less schematic. So the central upper part in Card I, being interpreted up to 7 years as "men," "eggs," "bird," becomes "gulf with peninsula," "nest with birds," "skeleton in profile"; or the upper peak in Card II is no longer a mere "stick," "peak," or "point," but becomes at 8 years a "dagger," "a bird's beak," and at 13 "a caricature with hat, mitre, with beard," and so on.

* All investigators of schizophrenic Rorschach reactions point out the relative importance of *Dd* in the manner of approach.

TABLE 11 *Typical Dd of Primitive Analysis (Including d)*

AGES	CARD: I			III	IV	V		VI		VII	VIII	Totals
	Upper center small "hands" and "heads"	Tiny dots outside the main blot area	White spaces inside	Center grey projections	Top center <i>d</i>	Ears of the top center <i>d</i>	Center legs	Upper center <i>d</i>	Side extensions of the upper "butterfly"	Bottom center dark or grey <i>d</i>	Upper grey peak	
2.4-3.6	0	0	1	0	0	1	4	0	0	2	0	8
3.6-5	2	0	2	1	1	3	4	1	2	4	0	24
5-6	8	4	1	4	5	4	5	7	8	6	0	52
6-7	3	2	1	8	0	0	2	4	1	10	2	37
7-8	0	0	2	1	0	1	2	0	0	5	4	11
8-9	1 *	0	0	2	1	1	1	1	0	4	0	11
9-10	7 *	1	1	6	0	3	0	3	0	6	1	27
10-13	3 *	0	0	4	1	1	4	0	2	0	7	16
13-15	0	0	0	3	2	0	0	0	1	3	0	9
Adults I	0	0	0	0	0	0	2	0	1	0	0	3
Adults II	4 *	1	0	0	0	1	0	1	0	2	0	9

* From 7-8 years on, the children combine these details into a more differentiated image. For instance, instead of separate "eggs" and "birds," they see "a nest of birds." Similarly, in Card II, the upper center *d* may be seen as "a head with hat and beard."

As psychological observations about the young child's global perception have produced special methods in reading and writing instruction, it may seem contradictory that the interest in small detail coincides with the age for which Decroly and others claim the capacity of global reading. The child learns whole words or even sentences before he is able to spell and to analyze the word. This contradiction is, however, only apparent: as long as the child perceives quite vague forms, all words of about the same length appear to him practically the same. Only after he gets interested in some marked detail (dots, strokes) can he rely on these marks which create the physiognomy of the word. Here interest in formal features and the capacity of perceiving them are two aspects of the same tendency in development. So the facts really correspond to our expectations if, according to Meyer [32] in his findings on reading in primary schools,

the accomplished readers present a decrease of *W* in favor of *D* and *Dd*, as opposed to the group that is not ready for reading.

The same interest in schematic forms and the attention to mere formal qualities are reflected also in the drawings of children. The knocker on the door, the window mullions, the tiles on the roof, buttons on clothes, and the like, are very important at this stage.

Many small details that now interest the child are not often used by adults, because they are not very suggestive for them. But for the child the potential richness of meaning does not count much if the spatial configuration strikes his fancy. This formal interest accounts for the great frequency of "sticks," "heads of animal," "legs," and the like, related to any line or point. Thus we find at the ages between 5 and 8 the response "stick" in 9 records with several perseverations (18); "stick" occurs in only one record after this age.

Table 12 shows some formal responses (form descriptions) *decreasing* with age.

TABLE 12 *Formal Responses (or Almost Formal)*

AGES	HOLE, HOLLOW, WINDOW, DOTS, LETTER, ROUND, STICK, LINE, STRING, TUBE, CANDLE *
3.6-5	11
5-6	22
6-7	24
7-8	12
8-9	5
9-10	2

* Details of this kind when combined with other parts of the blot in more complex images have not been counted.

The form descriptions "this is pointed," "there it is broken," to Card III have their analogy in the color descriptions. They both manifest a step in the conquest of objective reality, here at the expense of meaningfulness.

With regard to the small details at this stage, we have to mention another point: primitive seeing is still more closely connected with *motility* and *touch*. One can observe this directly by the way the

child rubs and touches certain parts of the blots, pats with his fingers some outstanding lines or protrusions, as if he wanted to touch a real object or even to lift it. Sometimes the child will also say, about a peak, "It stings" manifesting the tactile factor in his perception. Children with a strong tendency to *Dd*, when looking all over the blots for some small forms, give the impression of picking up small stones or other interesting objects with the passion of the collector.

The tactile element can also be observed in a striking manner in some schizophrenic *Dd*. Thus a patient, patting her hand on the two blue central lines going into orange in Card VIII, made the remark: "There are bits of wire, one cannot take them out." But while normal and mentally deficient children—the latter in an extreme degree—tend to persevere in these marked *Dd*, the schizophrenics I tested did not show this pleasure in picking out special small configurations in such a persevering manner. Their perseverations occurred especially in global reaction or in normal detail.

Summary

1. Out of the first reactions to the whole grows the tendency to crystallize some marked configurations as a beginning of analysis.
2. Many small details of the same type of shape (peak) are interpreted as a schematic concept characteristic for that particular shape (tree, stick, leg).
3. Characteristic forms play an important part in the child's elaboration. Form interests him very much. He often does not worry about its meaning and is satisfied with the mere description.
4. On the other hand, the child at this stage can often give very imaginative responses where the objective data do not play a great part. Very fanciful responses alternate with mere descriptions of form.
5. Primitive wholes on the one hand, attention to marked details on the other, are also characteristic of tactile perception. But besides this analogy of primitive analysis and tactile sense, there is much closer relation of both fields of experience: the child's perception is full of tactile representations shown in remarks such as "that stings" and in the general behavior of touching and rubbing

small configurational parts that attract his eyes, as if he were collecting objects.

6. At this stage we also find a high degree of repetition as the child very often picks out the same type of form and interprets it in the same way. He is guided in his research by the representation of a certain object—for example, “leg,” “man,” “mountain”—as well as by his anticipation of a certain type of configuration.

Analysis

Superior D

There are numerous *D*, the details of which are formed by separation from the main part or by the difference in color, which the child perceives nearly as well as the adult does. Here the segregation does not demand a special articulation of the whole. When these partial configurations suggest easily determined objects, the child will give rather similar responses. Thus in Card VIII, for the pink sides, he will see an animal; or, in the middle of Card III, the central red butterfly or bow, which is frequent at all ages except the very young. But not all easy *D*—easy because they form partial entities—obtain the same responses at all levels. For instance, the lower pink lateral part of Card IX, even at an age where the single round is noticed as a detail, does not yet suggest the usual adult *D* (“head of a man”) but is seen as “apple,” “stone,” and so on.

Table 13 (page 136) shows some of the typical *D* from which the development can clearly be traced.

1. Examples of the difficulty of segregation from environment: lower pink “head of animal” in Card VIII; “head of a deer”—greenish-brown inner *D* in Card IX.

2. Example of schematic perception of a *D*: pink *D* in Card IX. The trend of development in this area is particularly instructive. Up to 5 years we find only responses for the whole pink bottom *D*—for example, “blood,” “leaf,” “house,” “birds.” Then we find divisions into two or four segments interpreted in the schematic manner as “apples,” “cherries,” “squares,” “stones,” “cups,” and the like. The response “head” for one-fourth of the pink area does not appear in

TABLE 13 *Typical D Responses*

AGES	R	CARDS: I II III IV VII VIII IX X										Totals
		Center D: figure, object	Half: animal	V: Negro's head	Center D: animal's head	Top D: head	Lower D: pink animal's head	Inner D: head of a deer	Outer pink D: man's head	V center blue D: 2 men climbing	Top grey D: 2 animals	
2.4-3.6	155	0	0	0	0	0	0	0	0	0	0	0
3.6-5	377	1	4	0	0	0	0	0	0	0	0	5
5-6	546	0	0	0	0	0	0	0	1	0	2	3
6-7	527	2	0	0	0	0	0	0	0	2	2	6
7-8	515	3	0	0	0	1	0	2	2	1	3	12
8-9	425	0	0	0	3	1	2	3	2	2	5	18
9-10	541	1	3	0	0	0	1	4	6	4	9	26
10-13	600	5	10	0	8	3	3	4	5	3	9	50
13-15	496	4	3	1	7	4	3	6	6	5	5	43
Adults I	484	4	6	6	2	6	6	4	7	2	4	47
Adults II	848	11	9	5	9	7	5	10	10	9	9	84

our record before the age of 7, except once. It is interesting that one of our gifted adults stated about all these parts: "These are fruit in the expressionistic style," an observation that did not prevent him from seeing the usual head of a man.

3. Examples of the difficulty of restructuring by turning a blot: the young child, after getting an impression of the stimulus material in a certain position, will hardly give up this impression in a different position. While the adult or the older child can transform a perception even without turning the cards—for example, interpret the black and red halves in Card II as clowns and later the same black dots as animals—the young child sticks to his first organization, whether the card is turned or not. For this reason detail responses for parts of the popular men in Card III (for instance, their "legs" seen as "fish" when looked at upside down) are rare before the age of 7. Other restructured *D*'s like the "men's hats" seen upside down as "Negroes' heads," never occur in our records before age 13.

There are areas and elaborations which, rare even in adults, do not appear before the age of 10: those in the inner parts of the blots

in which the subject makes use of some shading differences to "paint" a three-dimensional picture, a landscape, a sculpture, and so on (Klopfer's *FK*). We are not concerned here with the significance that these responses might have from the point of view of emotion, but would like only to emphasize the high degree of elaboration they involve.

White Space Responses

From the point of view of development, the space responses present three main forms of elaboration, each one showing a particular level of perception:

1. (a) the space is perceived as a "hole," "window," or
(b) as a white surface, "snow," "water."

2. From seven years of age on, the space is elaborated in its specific contours as "lamp," "spinning top," and so on (Cards II, III). At the same time we see a decrease of the mere formal, schematic, or chromatic responses.

3. Each of these perceptions can be connected with the black parts surrounding it, first as rather primitive syncretic *W*'s, "mountains with holes" (Card II), then as eyes, mouth, and the like, combined with the rest of the blots in the "head of animal" or "mask." Finally in the imaginative adult and adolescent, these perceptions appear as the combinations that Beck [2] has described among the highest organizations of form, where not only all areas, but also several qualities of the stimulus material (form, shading, color) can be integrated into a complex image.

Table 14 (page 138) shows the first increase of *S* after 6 years with no clear further trend. But with regard to the elaboration mentioned above, we see the first marked increase of real forms in *S* and the decrease of the descriptive or formal *S* at about 9.

In relation to the psychological significance of *S*, it might be mentioned that there is an obvious interdependence of productivity (number of responses) and occurrence of *S*. In comparing average *R* of all our records with the average of the records containing *S*, we obtain for each age a higher average for the latter. This comparison leads to the conclusion that *S* depends on the number of responses—

TABLE 14 *Trend of Production of S Responses
by the Various Age Groups*

AGES	MED. R	SUM OF PRIMITIVE AND DIFFER- ENTIATED S	1	2	3
			PRIMITIVE S (HOLE, WINDOW— WATER, SNOW)	DIFFERENTIATED S (SPINNING TOP, LAMP)	SW, WS COMBINATIONS
3.6-5	19	6	3	3	1
5-6	24.5	9	7	2	1
6-7	25.5	10	6	4	13 *
7-8	25.5	13	5	8	11 *
8-9	19	11	7	4	7
9-10	26.5	14	3	11	6
10-13	25	16	3	13	6
13-15	22.5	9	0	9	7
Adults I	23	22	1	21	16
Adults II	39	27	1	26	16

* Increase, due to frequency of "tunnel," "head of animal," "mask."

that is, on the eagerness shown during the test. Observation of individual cases combining several signs of analytical attitude with production of S finds its parallel in the observation of the whole group of 5- to 6-year-olds, where we have seen a particular eagerness in detecting form qualities and, at the same time, a marked increase in S.

Cases where S occurrence is combined with many good forms and variable articulation of the blots are among the manifestations of

TABLE 15 *Comparison of the Mean R for the Total Group with the
Mean R of the Subjects Giving S Responses*

	AGES									
	3.6-5	5-6	6-7	7-8	8-9	9-10	10-13	13-15	Adults I	Adults II
Mean R for total group	16.6	27.3	26.35	25.8	21.2	27.5	30	24.8	24.2	42.4
Mean R for subjects giving S responses	20	37.7	33.7	27	25	29.7	33.4	26.5	28.2	44.2

flexibility or plasticity of perception, which we have dealt with in our preliminary remarks and to which we shall come back later.

Superior Globalization

Superior wholes, like superior details, result from an articulated perceptive process. But in the individual case we cannot always distinguish (without inquiry) whether a *W* is due to a superficial or to a differentiated perception, as the final response may be verbalized in the same way. This applies to many popular or almost popular forms which even a vague or schematic perception may recognize. It is true as well for schematic *W*'s which the young child perceives without analyzing anything else and which the adult perceives in addition to more complex images. In the following table those *W* are shown where we found rather a distinct evolution with age.

TABLE 16 *Development of W*

AGES	<i>W</i>	POPULAR <i>W</i> 's IN CARDS I, IV, V	BILATERALLY SYMMETRICAL <i>W</i> 's	COMBINA- TORIAL <i>W</i> 's
2.4-3.6	71	3	8	0
3.6-5	176	13	17	6
5-6	126	14	15	5
6-7	140	23	17	9
7-8	126	26	22	17
8-9	107	29	21	14
9-10	98	29	20	14
10-13	134	38	22	27
13-15	147	39	23	22
Adults I	183	46	29	27
Adults II	208	41	36	46

In the category of popular *W*, development is more a matter of knowledge and vocabulary than of mere perception. The stereotyped responses like "animal" have led to specifications, becoming "butterfly" or "bat" according to the development of these concepts and their verbal expression. But the other patterns of *W* are due primarily to the development of perception in a stricter sense.

Let us mention two more patterns of *W*, which we found only from 13 years upwards:

1. Schematic superior *W*—based on the general outline used in a differentiated way. Examples: Card I, "crown." Card VII (V) "bust with Napoleon's hat."

2. Impressionistic *W*—based on the chromatic or the depth impression combined with form elements. Examples: Card VII, "seascape with harbors, canal"; Card IX, "geyser"; Card X, "artistic design."

Beck [2] and Fuchs [6] have found patterns of *W*, characteristic for high intelligence, that agree with our findings in this general fact: Whether they are combinations of form and shading effects or of space and color, or contain a movement impression, they all take account of several determinants which are immediately or successively fused into an image. They all result from complex differentiated perceptive and representative processes while the primitive *W* are products of superficial perception and superficial conceptualization.

Summary

1. We have distinguished four main types of superior *W*: bilaterally symmetrical, combinatorial, superior schematic and impressionistic. The movement determinant also plays a part in superior globalization; it has not been mentioned so far as the *W M* are included in the bilaterally symmetrical or superior schematic categories. The determinant *M* will be dealt with in a later section.
2. The quality of a *W* depends, like that of a *D*, on the degree of specification, but the superior *W* appear later than the superior *D*.
3. The combinatorial *W* represent the highest level of perception, including analysis, synthesis of the forms, and logical integration of successive impressions into a well structured unit.

Combinatorial Processes

Arbitrary Constructions or Confabulatory Combinations

Here we have in mind responses of the pattern "castle (white middle space) with trees (green)" in Card IX, or "table and table cloth to put on it" (Card IV). One might say that the child feels

a necessity to give a reason for the remaining parts of the blot and cannot restrict himself to the first response.

Many detailed descriptions of animals or men belong to this kind of response. The elements assembled into a more or less illogical whole remind us of children's drawings, where the order of elements depends much more on the order in which the child thinks of them than on their logical relation. Klopfer, speaking about arbitrary *W* responses, also points out the likeness between early drawings and these responses. Both are characterized by the faulty relations in their composition. The child draws and interprets by simple addition and not according to objective position; Luquet called this phenomenon "intellectual realism."

Condensations (Rorschach's Contaminations)

We have already spoken of this manner of combination during our preliminary research, where we obtained answers like "moon and a lady on it." In the following example, given by a 4-year-old, we find exactly the same process of thought based on perception, though here one impression is determined by color, the other by form. The child, seeing a flag in the blue blots of Card VIII, is impressed by the blue as sky. He concludes: "flag in the sky." Another amusing example by a child of the same age (4.6), again from Card VIII: "A little boat (*W*), frogs (pink lower parts), they are coming out of the boat." The green lower central head of the "rabbit" in Card X is the object of the most curious contaminations. For example: "Little rabbit *with* grass," the green of the rabbit being integrated in an illogical construction. The following answer of a 9-year-old girl shows a rather fanciful effort to assemble things at any price. In spite of the lack of realism, the concept is not as illogical as the former one: "Head of a rabbit who carries two beans on his back." As a matter of fact, the back is not seen, but it is rather an imaginative combination, more than a contamination. The next example, still more developed, given by a girl of 12 (who was very amused by it) shows a clear mastery of the two successive ideas: "Head of a rabbit; that is funny, a shawl is coming out of its eyes." At the age of 7-8 we have the greatest frequency of condensations. Most of them are given by

intelligent children with rich imagination and they often manifest a certain discrepancy of form level and logical elaboration. One might say that perceptive maturity in form differentiation and complexity precedes intellectual comprehension. Here are some typical examples: Card IV; "Man who has spilled a bottle of ink." (Condensation of form and color). Card VII; "Little snowman, a ball has fallen and broken him in the stomach." (The white space is reasonably interpreted as snowman, but at the same time as a hole.) Card IX (Green parts); "Animal in grass." (This answer in quite a similar manner has been given by Rorschach as typical for schizophrenic contamination: "Grass-Bear.")

A very complex perception is shown by a 7-year-old boy, who is overwhelmed by his dynamic imagination: Card IV. "A monster who has put snakes on his hands and wants to throw them into the figure." Thus the arms of the monster are seen in the first conceptualization as snakes; but the child, instead of formulating an alternative (these parts could also be snakes) does not disassociate the second idea from the first and creates his illogical imaginative fusion. We are not going to enter here into the part played by the emotional factor underlying the whole process.

Finally here is the answer we obtained to Card VII from a child of 5.6 and the very similar one given to the same card by a schizophrenic patient. *Child*: "This is the mountain which opens in the middle and little children who are hidden." (Children in the upper "heads" are not clearly indicated.) *Patient*: "Children at the seashore . . . Gaston, Henry . . ." (further associations). Here the entire halo is interpreted as "children" after having been seen as a shore.

Logical Relations

There are two principal kinds of logical connection of successive impressions: (1) the more realistic one, enumeration of the different objects, or, if there are two ideas about the same part, an alternative formula, and (2) the more imaginative combination by integration of several parts into a more complex one or, in the case of the two ideas about the same object, the transformation of the first into a more specific one.

EXAMPLES: **CARD VII:** Two persons, heads, two animals' heads. "There are two persons, their bodies seen from the side might be an animal's head."

CARD VII: "Two elephants with a wreath on their heads." Upper central part: "A man—no a paper knife in shape."

The Paris school (Professor Wallon) has taken up this analysis in connection with the results about the perceptive field, started by the present writer, and has found further details of intellectual elaboration parallel to our merely perceptive development [9].

Plasticity of Structures in Rorschach Reactions

We saw in the ambiguous figures that a general difference between primitive and mature perception consists of the rigidity or flexibility of the structures. The number of cases where both meanings can be seen increases regularly with age, whereas the manner of approach shows a dialectic evolution (globalization, primitive analysis, analysis, synthesis) . From the conceptual aspect we might say: the capacity of understanding two meanings of the same object or the capacity of reversion of a mental structure is a function of the general mental evolution. How does this factor appear in the Rorschach?

The lack of flexibility in primitive or deteriorated perception—that is, rigidity—is also responsible for the stereotypy of adaptation, for the superficial seeing of the special properties of the blots, because the perception tends to maintain its structure. But in some Rorschach categories, plasticity plays a more important part than in others. Thus the *S*, if they occur in a certain number together with normal *W* and *D* and if they are precise forms, can be understood—as it has also been pointed out by Scharman [38]—as signs of the capacity for "Umstellung" or reversibility of structures. This is certainly true, but we think that this reversal of figure and ground conditioning *S* responses is only a very marked example of the general phenomena of "Umstellung" in the Rorschach.

The same may be said about the statement by Toman [49], who has analyzed the factor *M* (movement) in the Rorschach by comparing records with other more analytical tests containing movement

representation. He concludes that *M* is also related to the capacity for "Umstellung" of structures.

Let us demonstrate these aspects by analyzing our findings on the first three cards; these offer many opportunities for reversal, as the blots are neither dispersed nor too compact. Table 17 shows the results from the three cards.

TABLE 17 *Plasticity of Structures of Cards I, II, III*

AGES	NUMBER OF SUBJECTS	I (<i>W</i> + <i>D</i> LAT.) OR (<i>W</i> + <i>D</i> CENTER) OR (<i>W</i> + LAT. + CENTER)	II (WHITE SPACE + 2 SIDES)	III ("2 MEN" + <i>D</i> OR <i>Dd</i> USING PARTS OF <i>W</i>)	TOTAL
2.4-6	50	0	0	3	3
6-9	60	10	0	15	25
9-15	60	18	0	31	49
Adults	40	20	8	29	57

Card I is most frequently seen as a compact whole characterized by its wings (bat, butterfly). Its differentiation into the bilateral usual *D* and the central part presupposes a plasticity of the perceptive function which the young child has not yet attained. The particular difficulty for him is to proceed from a first global response to the separate use of the main parts. Here we have records with *W* and *D* (or the reverse) only from 6 years upwards.

In Card II, after seeing the black and red blots, the central white space tends to stand out as a figure for itself. Seeing the main black parts in their specific shape, followed or preceded by seeing the white space perceived as a real shape too, is the highest level of development and does not occur before maturity (adult groups).

Card III permits us to recognize some steps of the development of restructuring. Here is the response of a 4-year-old girl: "Don't know . . . a heart (*S*)—these are little lanterns (red bilateral blots)—this (black), don't know, this is around the heart." This answer is interesting as it shows, first, how an absence of idea brings out the *S* of the background and, second, that in that case the surrounding blot becomes nothing but background around the white figure. The next example (by a 5-year-old) shows a less formal and more confabulated

pattern on a slightly higher level: "This is like a moon (central red) — two hens (upper reds at sides) — this one, a house (center top) — the door (S) — this holds the house (black sides)." Apart from the illogical combination of the different parts of the final image, we see again that the use of white space does not necessarily mean real reversal of figure and ground. A better level of elaboration is reached by a boy of 5.6 in a most dynamic response: "The center—they have thrust through it with a gun—there they have soiled with color (upper red) — something that has fallen off there from the mountain (ears at the upper edges of the bears) — monkeys (black halves, bears)." Here we see the attraction of the white in the center, but also the difficulty of catching its specific form. The black parts, though, get a good form.

A transitory form of reversibility is shown in the response of a very gifted 6-year-old boy hesitating between attention to the white center and the rest of the card: "A head, no it is not a head (differentiated form perception of S), a rock and a hole (more complex perception but less articulated form), and here a fire and stick (central part) — this is water (S in a primitive perception), the sun is in the water and the rocks are around a brook, two brooks (upper reds)." After coming from white to black and vice versa, the child finally constructed a complex unity intergrating color and form in an impressionistic way, at the cost of a clear form perception of the fixed parts.

Even in the reactions of older children manifesting good form perception, we rarely have a distinct perception of the figure and the ground in reversion. A 10-year-old gave this response: "This is like a top—the black parts something of the body—tweezers (central part) there one might say Arabs sitting (red blots) — two mountains (ears of the bears, upper edges) — this is like a snowman (S)." This reaction already shows a high degree of sharpness of form and articulation, but plasticity in the sense of equal treatment of figure and background in a reversal of structures has not yet been attained, as the two most usual concepts (bears, men) are not realized.

The highest level of plasticity in Card III is shown by the example of an 11-year-old boy: "Two dogs (black) — butterfly (red) — two

rabbits (black)—there is a bird. But it is not a blot, does it matter? It is seen from above. Two red cocks (red upper blots)."

This case is interesting because it shows the correlative factors of perceptive plasticity in the field of reasoning. At the same time as the eye recognizes several aspects of the object, higher intellectual processes guide the subject. Here perception and reasoning compliment each other and demonstrate a more objective adaptation to the outside world. The plasticity of structures can be accompanied by imagination and can lead to combinations such as in a response to Card II given by a 21-year-old student: "There are two animals bearing a crest, like in a coat of arms—there is blood mingled with it." But plasticity of structures is not necessarily connected with imagination. It may be associated with a sharp, critical sense of reality without any combinatorial tendency: "a bear—a dog—the lacking part in the middle has the form of a top—the red, I don't know what to make of that" (response to Card II of a 50-year-old professor of statistics in a constricted record).

Card III may be used to show a third form of plasticity, a double to multiple organization of the same stimulus material.

Table 18 shows a fairly regular increase in the number of cases where a definite area, or the whole blot, has been seen in two or more ways; for example, the whole upright as "two men" and the same whole when turned upside down as "crab," or the "hats" held by the "men" seen from the opposite side as "Negroes' heads."

Some examples may illustrate development from the point of view of plasticity of structures found in this card.

R—— (age 4.3): "Ah, this is a butterfly (red center), this is a—I don't know (black)." (We turn the card, but the concept of the butterfly persists and there is no other answer.)

O—— (age 4.11): "Men (*W*)—this is blood—here (turned) the men turned."

Transitory Level

C—— (Age 9): (Card on opposite side) "This all is a man (*W*)—there is blood of the man—(card upright) two legs of a cow (legs of the usual men)." On inquiry the child accepts the suggestion of

TABLE 18 *Rigid and Flexible Reactions to Card III*

AGES	NUMBER OF SUBJECTS	NUMBER OF RESPONSES TO CARD III	NUMBER OF VARIABLE RESPONSES TO THE SAME BLOT AREAS
3.6-5	20	59	1 = 1.7%
5-6	20	53	2 = 4
6-7	20	63	2 = 3.1
7-8	20	68	9 = 13
8-9	20	52	4 = 8
9-10	20	72	9 = 13
10-13	20	70	11 = 16
13-15	20	59	11 = 19
Adults I	20	52	12 = 23
Adults II	20	92	17 = 19

the two men as usually seen. Spontaneously he has only seen a part of them as part of an animal, as the forms have probably been fixed too much for the first concept of the man in the opposite position.

M—— (age 12): "Two men lifting weights—two Negroes sleeping against the branches of a tree (*W*)—it is the reflection of water." Here each part of the first person acquires a totally new function in the second concept.

The transformations of a first organization in this card are particularly characteristic of plasticity, since the "two men" are usually striking and have a high degree of reality or the quality of a caricature, so that their image tends to dominate the reaction of the subject.

Let us mention that we did not observe any reversal in feeble-minded children, which confirms the general view about the rigidity of subnormal intelligence and subnormal perception.

Summary

In conclusion, we may remember that Rorschach himself indirectly took account of the aspect treated above when he spoke of the "richness of a type of perception." By this he meant the occurrence of many good *W* and good *D* and *Dd* in a record—that is, the degree of articulation and of complexity achieved by the subject. But he and his successors, as far as we see, did not yet pay special attention to the

general principle involved here. The degree of "Umzentrierung" or of plasticity of structures can be seen directly in three main forms:

1. By the interpretation of the principal parts of a blot, after or before it has been seen as a whole in a different way (for example, Card I: a butterfly *IV*; two men holding a person in the middle combinatorial *W*).
2. By the reversal of figure and ground (for example, Card II: bears, in the middle a lamp).
3. The most frequent form: a part of a whole concept, is perceived differently by itself. This is most often the case when the position of the card is changed or, with the card in the same position, a new organization of stimulus material is made (for example, Card III: the hats of the two men become, when turned, the heads of Negroes; the legs are seen as fish or as arms or as branches).

In accordance with the findings of general psychology about intelligence and perception, this factor of plasticity depends largely on the degree of mental maturity. It is the reverse of mental rigidity as manifested in perseveration, or of incapacity of finding a new concept when the card is turned.

The Influence of Color and Shading During Development

Rorschach was not the first to consider the role of color in perceptual reaction as typical for the individual. Several investigations, especially those under the influence of Jaensch [33] and Kretschmer [13], tried to prove typical differences with regard to color or form reaction; but it seems that the simple coördination of "disintegration and integration" or of "schizothymia and cyclothymia" to form preference and color preference is not possible. The reaction to the one or other quality depends not only on the psychological type, but also on the test situation and the material used. So in tachistoscopic color-form tests, manic depressive, or cyclothym, subjects react more to color than do schizophrenic or schizothym subjects. In other tests, where figures have to be matched according to form and color, the opposite has been noticed [19].

We find the same complexity of results with regard to color when we study the investigations on color-form reaction in the genetic

field. Most psychologists confirm the findings of Descocudres [12] and Katz [18], both of whom found a predominance of color reaction in children by making use of the method of matching figures according to form and color. Some reservations, however, have to be made in regard to the material they used. Segers [40] has shown in experiments with meaningless geometrical figures that color will dominate until 6-7 years; but with images the child can understand, he will match figures according to form at earlier ages (3-4). This seems quite evident when we remember that the baby recognizes his bottle by its shape [52] though, on the other hand, in situations where the meaning does not play a part for his vital needs, he reacts especially to color, light, and degrees of transparency or opacity. Stern has formulated this dual aspect of the color factor in perception rather well: "In spite of their strong impression on the emotional side, colors do not play a fundamental part in recognition or distinction of objects, or in the practical manipulations or in the orientation in the environment." [46, page 161]

If one begins experimenting with groups under 3 years, one finds that the general decrease of color effect with increasing age does not apply to the first age groups. Tobie [49] and Brian and Goodenough [7] have found that after a period of suggestibility, where the attention of the child to form and color depends on the material, there is a stage (from 3 to about 5) where the child markedly prefers color to form. This predominance of color decreases gradually, while the capacity to combine both qualities shows a regular increase.

Color Effects

Considering these findings in child psychology, we should expect to find little interest in color and little use of it in Rorschach reactions until 3 years, whereas after this age there should be a marked increase of color reaction and a decrease with age. Indeed, we see that most investigators of young children's Rorschach reactions agree in stating that the records before the age of 3 show few color reactions.

We find a marked increase in color responses in subsequent ages. In contrast to the findings of Tobie and Brian, in the Rorschach the height of color reaction relative to the total responses is located at

about 6-8 years—that is, much later. Dubitscher found the highest amount of sum *C* at 7, Ames at the same age, and our results show the greatest amount between 6 and 8. If Klopfer and Margulies have obtained the highest amount before 6 years, this can be explained, in agreement with Ford, by the fact that these authors include color naming in their *C* statistics. The difference of age with regard to the climax of color reaction in Rorschach and the other studies can easily be understood by the difference of material and of situation: in the Rorschach we not only take account of the attraction which the color exerts on the subject, but also of the use he makes of it in his response. And, as we know, in spite of his attention to color, the subject very often does not integrate this determinant into a fitting concept. But if—in order to have a better parallel with other investigations—we consider only those phenomena that do not include the finding of a meaning for the blots, we obtain quite similar results. Thus we see that color naming tends to disappear as a response after 5 (Ford, Ames, and the present writer).

Another indication of the increase in color reaction can be seen in the fact that more than half of the group of 3.6-5 started their responses to Cards II and III with the red blots, much more frequently than in other groups. In this and the younger group we also find most children using only the red details, without the black ones.

As to the third findings in form-color reaction experiments, the general decrease with age, it looks at first sight as if the Rorschach contradicted this result. But as we have already pointed out, in this test the sum of color responses does not merely reflect the subject's attention to color in contrast to attention to form, but its use in concept formation. And there we see with increasing age an increasing use of color as co-determinant of a concept.

This increase, however, cannot be regular, because both sides of the color response—namely, interest in color and elaboration into a fitting concept—interfere with each other so that in the middle groups interest is relatively weak, while the capacity for elaboration of this element has not yet been fully developed. The result is a certain decrease of the total amount of color responses in the middle groups. This trend is shown very clearly when comparing the three

TABLE 19 *Reactions to the Red Areas Relative to the Black Areas in Cards II and III*

AGES	NUMBER OF RESPONSES TO CARDS I AND II	NUMBER OF SUBJECTS USING ONLY THE RED AREAS	NUMBER OF SUBJECTS GIVING THEIR FIRST RESPONSE TO A RED AREA
2.4-3.6	28	3	0
3.6-5	84	6	13
5-6	106	4	5
6-7	119	1	5
7-8	117	2	9
8-9	91	1	5
9-10	120	2	8
10-13	131	0	1
13-15	101	0	4
Adults I	97	0	0
Adults II	175	0	3

groups of Thetford, Molish, and Beck. The mean of the sum of C for ages 6-9 is 1.98; for ages 10-13 it is 1.62; and for ages 14-17 it is 3.03.

With regard to the increasing complexity of responses and the growing capacity to integrate color and form, there is general agreement that the first stages use principally color without form, while

TABLE 20 *Development of Color Responses*

AGES	NUMBER OF RESPONSES	C-NAMING AS ONLY COLOR REACTION	ΣC	$\Sigma C\%$	C	CF	FC	NUMBER OF SUBJECTS HAVING AT LEAST ONE C
2.4-3.6	155	2	8	5	5	3	0	7
3.6-5	387	12	30	5.2	7	16	7	11
5-6	546	5	40	7.3	19	12	9	13
6-7	527	2	65	12	33	22	10	13
7-8	515	0	65	13	17	34	14	17
8-9	425	1	41	9.6	9	24	9	11
9-10	551	1	47	8.5	6	26	15	11
10-13	600	0	41	6.8	5	15	21	8
13-15	496	0	45	9.7	3	15	27	8
Adults I	484	0	41	8.4	2	14	25	8
Adults II	848	0	92	10.9	6	47	38	15

the later ones succeed in combining color and form. We do not intend to discuss the differences between different investigators about the relative increase of *CF* and *FC*, because, from the aspect of complexity, both kinds of responses can represent a high level. The *FC* responses increase more regularly, while the *CF* responses, after a certain increase until school age, tend to diminish until adolescence where they reappear and again increase. The findings of Thetford, Molish, and Beck show the highest sum of *CF* for the 15-17 age group, which is not included in our research. But our well-educated adults reacted with regard to *CF* like the adolescents of the American authors, showing the highest amount of this kind of response of all age groups.

As to pure *C*, everybody agrees with the statement that these responses decrease with age after a first marked increase, which runs parallel with the other symptoms in color interest. But the category *C* in early childhood is not the same as later on. At the first stage (3-5), which we have characterized as the age of predominance of color reaction, *C* means mostly an association on the basis of color to a colored object, regardless of its specific color. In such an unspecified *C* the child generally uses a colored object for any colored stimulus: flower, leaf. Even objects which have a definite chromatic character (fire, sun) are used in this way. Sometimes the child will specify by naming a red sun or a blue sun, if he is interested in indicating color. It is obvious that this pattern of unspecified color reaction is one more aspect of the lack of differentiation or syncretism and is intimately connected with the tendency to perseveration.

This pattern of unspecified *C* shows the schematic way of concept formation in which one quality or one part of an object serves as criterion for the total concept. The child here not only disregards form, but also the specific color, and for this reason this *C* is more primitive than the usual pure *C*, which is merely characterized by the absence of consideration for form. Unspecified *C* is not even a *C*—; it is not inaccurate when associating, for example, "flower" with any colored blot, since flowers may have any color.

In examining children's reaction to color, we can describe some

typical phenomena in the order of their genetic appearance, as follows:

Up to 5 years

1. The reaction to color shows in a change of behavior: The child stops perseveration of the same response or stops rejection. Five out of our ten youngest subjects show this stimulating effect. It might be called a positive shock.

EXAMPLE. C—— (age 3): Card I, rejected. Card II, "Flower." Card III, "rooster" (popular man). Cards IV to VII, rejected. Card VIII, "Flower (tapping on the red-orange bottom), he is hurt, the dog (sides)." The last two cards were rejected.

2. The child points at the colored blots.

3. The child names the color instead of finding a response.

4. The child gives unspecified color responses, generally perseverated, of the pattern "flower, leaf" to any colored blot, naming or not the individual color. "This is red fire, this is green fire," and so on.

5 to 6 years

More specific C than unspecific. Some children now interpret all red blots as fire, sun, blood, linking the red with these concepts.

EXAMPLE. O—— (age 5): Card II, "Don't know much about this. It is a mountain with the sun (black and red center), and then the sky (2 red tops)." Card III, "Men, the red is blood." Card VIII, "Bears, there is blood—why?" Card IX, "Mountain, this is blood (pink), they are dead (green animal)." Card X, "mountain" (long red parts), "here are flowers" (rest).

6 to 8 years

1. No more unspecific color responses.

2. Increase of exclamations: "This is pretty." "Now come colors."

3. Combinations with fire, sun (volcano, bombardment, sunset).

4. Marked increase of color in popular forms (FC). Card III, "Negroes." Card VIII, "pigs" (sides). Increase of butterfly and bow for the red areas in Cards II, III, VIII.

5. Beginning of attention to shading effects (texture).

From 8 years

1. Rejection of colored cards because of irritation by color.
2. Enrichment in the choice of *FC*. For example, caterpillars, grasshoppers in Card X, landscapes of different sorts in IX; impressionistic wholes, such as "bottom of ocean" in X, or "lamp at night" in II.

Later childhood

With the decrease of color influence on response, differentiated use of shading and of movement appears. This will be analyzed in the next section.

Shading Effects

In discussing the development of *W*'s and of form elaboration in general, we have already mentioned shading as a determinant. It has often been pointed out that shading responses are rare in young children's records, but we think this is only true of differentiated shading responses. As we tried to show before, the ambiguous character of the stimulus material (including their shaded surface) plays an outstanding part in all responses containing objects of no specific form like mountains and stones, which are frequent in young children's records. Shading also plays an indirect part in perseverations because it contributes to the ambiguous character of the blots.

Table 21 shows the development of crude *K* or *c* in comparison with the development of *FK* or *Fc* (responses in which form and shading are both integrated).

From the genetic point of view, Rorschach's conception of color and shading responses and their significance seems fully justified. Mere color reaction in the Rorschach test situation means capture by the stimulus and loss of the intellectual elaboration of the meaning, which is principally related to form. The degree of form elaboration shows to what extent the subject links the emotional stimulus to the rational one, based on form. As color generally does not guide us in understanding the objects of our environment, a strong attraction to this determinant can be interpreted as a lack of intellectual mastery of reality and a relative importance of the emotional sphere.

TABLE 21 *Development of Shading Responses*

AGES	NUMBER OF RESPONSES	PRIMITIVE SHADING (CLOUDS, ROCK)	DIFFEREN- TIATED SHADING (FUR, NIGHT BIRD)	CENTER, GREY <i>Dd</i> CARDS III, VII	
				PRIMITIVE SHADING (SKY, WATER, ETC.)	DIFFERENTIATED SHADING (LANDSCAPE, STATUE WITH SHADOW, ETC.)
2.4-5	532	18	0	3	0
5-6	546	33	0	11	0
6-7	527	31	1	14	0
7-8	515	21	6	8 * (1 comb.)	4
8-9	425	14	13	1 * comb.	3
9-10	541	17	11	7 * (2 comb.)	3
10-13	400	12	17	5 * (2 comb.)	8
13-15	496	3	21	2 * comb.	12
Adults I	484	4	41	1 * comb.	8
Adults II	848	7	52	2 * comb.	27

* The area in the center, seen as water or channel, is linked here with adjacent parts to landscapes.

Binder's F (Fb), Klopfer's Fc

A similar development can be traced for the use of shading in small details.* We have already mentioned that fine elaborations of graduated tones of grey appear rather late in development and belong to the most differentiated responses.

It is interesting to follow the development in a special blot area with regard to the particular use each age level makes of the shading. The grey central parts in Card III and Card VII offered the best illustrations for this analysis, in Table 21, two last columns.

We notice that responses like water, lake, sky, based merely on the effect of grey on white, tend to develop into three-dimensional concepts, based on refined elaboration. An example of this was produced by a child of 13 about Card II, top center: "A kind of weir, there are trees on both sides, a porch, shadows."

* See also the remark on classification, page 122.

Summary

1. At all ages form represents the dominant determinant. There is, however, a strong increase in color reaction at about 4.5, shown in a predominance of the red blots over the black (Cards II and III) and the frequency of real C—that is, of specific color reactions (fire, sun, blood).

This stage can be taken as the one which, in the experiments on color-form reaction, has been mentioned as particularly attentive to the color factor.

2. The development with regard to color in the Rorschach can be summed up as follows:
 - a. Color naming, touching or patting the colored blots, change of behavior (end of rejection or perseveration). Association of a colored blot to a colored object in an unspecified way ("flower" for any colored blot). Little integration of the color quality into responses.
 - b. Association of color to an object of the same color. Stage of highest interest in color.
 - c. Decrease of pure color responses, increase of responses based on both color and form.
 - d. After a certain decline of the relative color dominance (next to form) during later childhood, an increased influence during mental development in non-constricted adults, together with all the other possibilities offered by the stimuli (refined use of shading, movement).

Development of Movement Responses

The psychological meaning of the factor *M* in the Rorschach seems to be quite well defined: it is the sign of an inner creativity, of the delay of drive impulses, the expression of "introversion." The investigations agree in stating that it is correlated with chronological and mental age. It is positively related to elation and negatively to depressive states and severe, particularly organic, disturbances. We feel, however, that the determinant *M* in the Rorschach still lacks full

clarification. The other categories of the test can easily be related to other phenomena in psychology (for example, the polarity between global or analytical attitude, the color-form reaction); but the category *M*—the tendency to see in abstract forms living beings in movement or posture—has not been treated as a special phenomenon in other fields of psychology.*

The question that interested us with regard to *M* can be formulated in the following manner:

1. What is the general phenomenon which in the Rorschach appears as *M* response? What does it mean independently from the Rorschach situation?

2. Why do children produce less *M* than adults? Why do pre-school children, in a phase of active imagination (constructions, role-playing) project so little of their imaginations into the blots? Why do the roles young children give themselves in play (watchman, pilot, Indian) fail to occur in their responses? Can the examination of the genetic aspect help to clarify the general problem of the factor formulated under question 1?

Before continuing, let us say that we limit our analysis to the classical *M*—the movement of a human or human-like creature. The differentiations Klopfer and Kelley have introduced show very well the complexity of this category: there is, above all, the *dynamic* aspect of the perception—motion as opposed to static shape—and there is the empathy (*Einfühlung*) of the subject with regard to the perceived movement (kinesthetic experience). More recently Friedemann [16], experimenting on movement responses, established a classification which also corresponds to these two aspects. In his view the first (dynamic) depends on a certain disposition (surplus of energy); the second (kinesthetic), on the degree of sublimation of instinct.

The distinction of movement seen in human beings, in other living

* With one exception: in the theory of "*Einfühlung*" Lipps [8] describes the projection of body feelings into the shape of any object. But this theory is applied to any perception, not only to the kinaesthetic which Rorschach distinguished from the perception of static form.

creatures, or in objects is suggested not only by direct observation of cases but also in the genetic point of view. The category of *m*, according to Klopfer's system * has been found to be without any relation to age and rather rare in all ages.

M is, in virtually all investigations, shown as distinctly increasing with chronological and mental age. The *FM*, movement of animals, including in many studies both verbally expressed animal movements (such as climbing animal in Card VIII) and really kinesthetic movement (dancing bears in Card III) does not show the same regularity of development. It can, however, be claimed that it increases during the whole childhood and is always higher than *M*, while in adolescents and adults *M* is greater than *FM*. The relation between *FM* and *M* is very similar to the one between *C* and *CF* or *FC*. In both cases the second category shows the higher level of development.

Table 22 shows the development of *M*, which is irregular only with regard to the 8-9-year-old group, composed of highly constricted subjects. This group is one with very few responses and little color. There is only one category that equals the development of *M* in regularity—the "human" content (*H* + *Hd*) %. As *M* is by definition connected with seeing persons, this parallel in development is not surprising. We shall come back to this essential relationship.

TABLE 22 *Development of M Responses*

AGES	<i>R</i>	<i>M</i>	MEDIUM	MAXIMUM	MINIMUM
2.4-5	542	0	0	0	0
5-6	546	3	0	1	0
6-7	560	14	0	0	0
7-8	515	20	1	4	0
8-9	425	12	0	2	0
9-10	541	23	1	4	0
10-13	600	30	1.5	6	0
13-15	496	37	1	6	0
Adults I	484	39	2	6	1
Adults II	848	71	3.5	7	1

* Klopfer's *m* is not identical with Friedemann's dynamic responses, because it is possible to feel also in natural or abstract forces the movement with one's body. But it certainly contains more diffuse dynamics than real kinaesthesia perceptions in the original definition.

Why, we may now ask, does the determinant *M* increase with age? In trying to answer this question, we shall perhaps be able to state the general character of *M* more precisely.

The Relation of M to Spatial Differentiation and "Umzentrierung" (Plasticity of Mental Structures)

1. Spatial Differentiation

From the point of view of configural elaboration the following thesis could be put forward: the difficulty of differentiating the whole into parts plays an important role in the small amount of *M* in children. Indeed, there are certain *D*, often suggestive of *M* in adults, which do not belong to the normal details given by children; for example, in Card I we found only one case in our groups up to 6 years using the central *D*. Besides this, we have already mentioned the fact that young children rarely perceive new images by turning the card. Many *M*, as in Card III (whole with raised arms or bilateral Negroes) or in Card IV (lateral position, "foot" projection interpreted as bent person) do not impress the child. But in following the development in Card III we notice that the difficulty of articulation does not play the decisive part. It is not the perception of two symmetrical figures that distinguishes the different ages, but their animation. (See Table 23.)

TABLE 23 *Principal Responses to Card III*

AGES	ANIMALS	MAN	ANIMALS OR MEN WITHOUT THE LEG	INDICATION OF THE ACTION	COMBINATION WITH OTHER BLOT AREAS
2.4-3.6	3	4	1	0	0
3.6-5	6	3	3	3	1
5-6	4	4	6	1	0
6-7	3	5	4	4	2
7-8	1	10	2	2	1
8-9	1	10	2	1	0
9-10	1	9	1	4	4
10-13	0	5	1	10	5
13-15	0	6	0	8	5
Adults I	0	7	0	10	8
Adults II	1	2	0	18	11



FIGURE 4

Ambiguous figure: one version of the pipe cleaner "man."

This point can easily be illustrated by special figures of the pattern presented in Figure 4. Having seen that all the children (20 from 5-7) except three interpreted it as a June bug, a duck, or letters of the alphabet, we constructed figures of this kind with pipe cleaners. In the three-dimensional figures the children up to 7 years also saw fewer human creatures than animals.

Instruction: "Look at this (held upright). What could it represent? You can take it in your hands." After the child has given his response, the next one is shown: "And this?"

The experiment was not carried out with all age groups. We can, up to this point, show only the difference between the youngest subjects and a group of 10 girls of 18 to 20. (See Table 24.)

TABLE 24 *Interpretation of Three Pipe Cleaner Figures*

AGES	NUMBER OF SUBJECTS				OBJECT,			
		ANIMALS	PERSONS	NATURE, TREE	RIVER WATER	LETTER	THREAD	REJ.
4-5	9	12	8	2	1	0	0	4
5-6	11	13	9	1	3	0	2	5
6-7	11	12	18	2	0	0	0	1
18-20	10	0	30 (or both person and animal)			0	0	0

Another experiment with ambiguous figures (human being or tree, see Figure 5, page 162) gave quite similar results, as shown in Table 25.

TABLE 25 *Ambiguous Figures: Tree or Person, or Both*

AGES	NUMBER OF SUBJECTS	TREE	PERSON	BOTH
4-5	10	9	1	0
5-6	16	11	3	(tree and head, <i>Do</i> , 1 reject)
6-7	12	11	0	1
7-8	7	6	0	3 1 tree and <i>Do</i>
9-10	10	4	0	6
10-11	18	1	0	7 1 begin with person
11-13	9	2	0	7
18-20	10	0	1	9 5 begin with person

All these experiments prove that independently of Rorschach material, the children tend to perceive certain configurations less frequently as human beings than adults do. We shall see later that in other configurations corresponding to the primitive concept of man the relation will be the reverse.

With regard to our hypothesis about the role of spatial differentiation in *M* formation, our experiments show that without any problem of spatial differentiation the perception of human creatures encounters difficulties up to a certain age.

2. "Umzentrierung"

As the capacity of seeing *M* or *H* in the last ambiguous figure developed parallel to the capacity of seeing both aspects of the design, it seems probable that there is a close relationship between *M* production and the capacity of "Umzentrierung," the plasticity of perceptive structures. This relationship would also be suggested by the development of flexibility in the Rorschach, a factor that contributes to the enrichment of the manner of approach. (See above, pages 143-148.)

This response has been claimed by the Austrian psychologist To-

FIGURE 5

Ambiguous figure: "tree-man." See Table 25, page 161.



man [50], who correlated M in the Rorschach with special verbal tests and arrived at the conclusion that M in the Rorschach means nothing else than "a specified description of the process of 'Um-zentrierung.'"

The factor of "Umzentrierung," depending on the degree of mental plasticity, has also been claimed by Lewin in his theory about feeble-mindedness. [26] The main differences between the primitive and the developed personality would be the difference in mobility of mental structures. The rigidity of the primitive structures is the reason for the lack of imagination in feeble-minded children. In our case it is the reason for the lack of imagining moving creatures.

In our material (a series of ambiguous figures used for examining M tendency, of which Figure 5 is an example) the correlation between M in Rorschach and alternative concepts, implying "Umzentrierung," is not high. Keeping in mind the small number of subjects, we notice for the 4-6 group (24 subjects) a correlation of

0.46, the highest in our material (24 cases $6-8 = 0.28$; 20 cases $8-10 = 0.29$). The distribution shows that the capacity to see both aspects of a figure seems to be a necessary but not sufficient condition for *M* production. In other words, a person may be capable of seeing several aspects of an object and easily realize "Umzentrierung" without giving in the Rorschach a large number of *M*. Flexibility of structures runs parallel in development to *M*, but it does not explain it sufficiently.

The Concept of Man in Children's Responses

In Rorschach literature one often encounters the idea that the predominance of the animal movement as against human movement is an expression of the fact that, the younger the individual, the nearer is his inner connection with the animal sphere. But is it really a matter of emotional development? If this were the case, why then the importance of the "little man" in the child's drawings? Why the importance of dolls for the little girl? Why the role-playing which certainly involves as many human creatures as animals?

We have already discussed a certain discrepancy between the child's main interests and the images he perceives in the Rorschach. If the young child sees a tree in Card I, it is not because he is so interested in trees, but because this configuration, or some part of it, fits his concept of a tree. Now we may ask: Why do the blots so seldom fit his concept of man? Or, to put the question in a more general way: What is the primitive concept of man?

Observation of early development (the baby's smiling response [17, 44]) and of children's spontaneous responses in constructions, drawings, and the like, show two main principles on which the first concept of man is based: (1) the human face with its two eyes (the physiognomy has the strongest effect on the concept formation and plays an important part during the whole preschool age); (2) the vertical dimension.

Figure 6 (page 165) gives an example where the physiognomic aspect strikes some children so forcefully that they do not see the lamp (which they recognize, however, without the figure). This physiognomic effect distinctly decreases with age. (See Table 26.)

TABLE 26 *Ambiguous Figure "Lamp Head"*

AGES	NUMBER OF SUBJECTS	PERSON ONLY	LAMP ONLY	LAMP AND PERSON
4-5	10	6	4	0
5-6	16	4	8 + 2 "pudding"	2
6-7	12	3	9	0
7-8	7	0	5	2
8-9	10	0	5	5
9-10	10	0	3	7
10-11	8	0	2	6
11-13	9	0	3	6
18-20	10	0	4	6

These findings are confirmed by many observations in spontaneous responses of young children: a closed oval or circle with some dots in it, such as a potato, may be interpreted as a head.

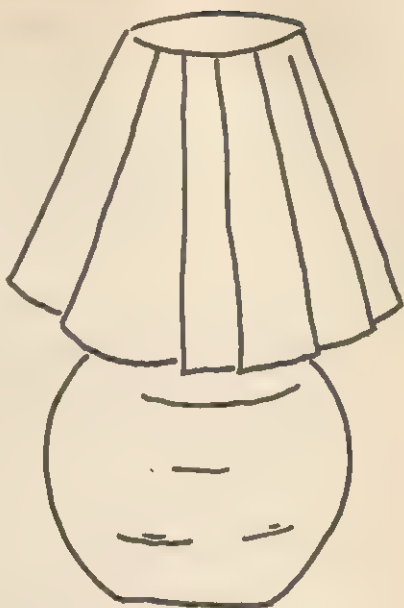
On the other hand, any stick or upright object corresponds to the concept of the human shape. I have collected quite a series of remarks by 3- and 4-year-olds: "This is Daddy and this Mummy," when holding upright two spoons or two matches. In construction games, chess pieces are always used as "men" and other children immediately understand the constructor's intention. The adult, of course, can accept this concept, too, as an extreme schematization to which he adapts himself in playing.

In the beginning of drawing one can observe these two main poles of the "man concept." There are children who in their first scribbles come to a stage where they alternate in trying circles (with or without dots for the eyes) and long lines, often parallel, sometimes with concepts such as railways or streets. Gradually these round and linear scribbles grow into the familiar "tadpole."

In the Rorschach ink blots there are few configurations corresponding to the first concept of man. The fact that the young child's first man is characterized by the full face—the great majority of children draw profiles only in their first school years—explains why the two popular figures in Card III are, at first, more often interpreted as ani-

FIGURE 6

Ambiguous figure: "lamp head."



mals than as men and why responses (mostly *Dd*) of profiles are very rare even in cases of strong interest in edge projections.

The limited differentiation of the young child's perception and representation of the human body appears rather surprising. We have examined about a hundred children between 3 and 7 by several methods (little stories,* drawings, dictation,† and others) with regard to their image of the body—their own and the body of the examiner. Whether they are asked about their own body or someone else's does not make much difference.‡ We cannot here go into the details of this study, but we will note that the child often names even less than he is able to represent by drawing. In verbal description of the body the tadpole image often persists when, in drawing, the child

* For example, in one of these stories a child explains to an animal in what ways man and animal are different, how each one "is made."

† The examiner asks the child to tell him how he shall draw a person, what to begin with, etc. Sometimes we executed the drawing as the child named parts; in other cases, only after the child had finished his enumeration of all the parts of the body he knew. (A report on this investigation is to be published.)

‡ Schilder [39] also takes account of the two aspects, body of others and own body, in the construction of body image.

has arrived already at a representation of the trunk. Few children indicated, by pointing with their hand, more than those parts they use in their drawings.

So we see that—all considerations of dynamism or kinesthesia put aside—the child sees fewer human figures than the adult in the Rorschach, because his body concept, or his body image, is schematic and does not correspond to the configurations suggesting "men" to an adult.

Representation of Movement

But how will the child react when there is no difficulty in the perception of a person? Will he be able to feel the movement or the posture of a figure? Is kinesthetic perception possible when there is no difficulty in seeing it? In order to answer this question we designed ten figures of persons in vague dancing, boxing, sitting, and similar actions. The range of responses was very narrow. We asked the same children and adults who had been our subjects before: "How do you see this person? What does he do?"

1. The youngest subjects, showing some difficulty with certain images, tried to imitate the movement. In this case they were content to state: "Like this."

2. In most cases, the children finding a fitting action did not imitate the action but indicated it verbally.

3. The adults (the 10 girls from 18 to 20 we examined) all showed more or less of a tendency to accompany their response by some gesture, or, at least, by a weak beginning of a gesture.

This simple experiment shows the steps of internalization of perceptions: (1) Imitation. (2) The gesture is no longer necessary when the inner image is established and can be expressed by a verbal symbol. The verbal concept has replaced the imitating gesture (Piaget). (3) We see that the first imitation has come back as empathy, more or less visible in the subject's gesture. Now there is, in addition to the verbal response, a representation (or imitation) of the image. By this we mean that the subject empathizes with the person represented by kinesthetic experience.

The lack of gestures accompanying a description in a test situation

FIGURE 7

One of the ten ambiguous figures suggesting various actions.



is remarkable when one asks young children to define concepts such as a giant, a snake, a fountain, all notions that easily produce, in the adult, movements, sketches of impulses imitating the image. Ten children between 6 and 7 whom we asked these definitions gave only verbal indications: "It is big, it is green," and so on. Only one of the boys jumped up at the question about the grasshopper and demonstrated the animal's movements (probably because he had observed this insect with great interest shortly before the test, as I have reason to believe). Of course, when the same children give a spontaneous report of what they have seen or what they have done at play, they may make intensive use of gestures and of imitations of their inner images.

Why does a child vividly imitate a creature in his movements and expressions, whenever he represents them spontaneously, and why do his inner images seem to be static under a test situation? The reason evidently lies in the nature of representation. Representation is not

simply a tracing which perception has left in the mind. It has developed by imitation of the object (Piaget). All new objects that arouse the child's interest become objects of imitation and are integrated into his mind by imitation. The characteristic feature of these representations in primitive stages is their *dependence on action*. The child of 5, living in his imagination, does not sit down and daydream; he *plays* the dog, the wolf, the watchman, or his father in order to represent them alive. Representation gradually becomes independent of action at some time before puberty. This internalization is even more necessary for the representation of movement. We can only represent movement distinctly if we have a clear image of what is executing it. This inner execution of movement, out of the context of the child's natural need, seems to be one of the most difficult mental processes. This can also be demonstrated by the experiment which Rey [36] has described. He asked children and adults to visualize a certain design they had learned before, without moving. He could prove experimentally that all subjects drew the lines by muscular innervations. But movements of the adults were generally invisible to the spectator, while the children were incapable of visualizing the design without making distinct movements with their head or hands. They also performed the test much more slowly.

Children's representations are more closely connected with real action, and they are less internalized. The young child's imagination is always image plus acting out.

These conclusions lead to the assumption that the lack of *M* in the Rorschach has its reason:

1. In the schematic and undifferentiated character of the child's image of man or of his own body.
2. In the limited autonomy of the child's images, which he can only revive in connection with his total experience and by action.

The trend toward differentiation of development does not only apply to figures. It can also be traced in the development of movement itself. At the beginning we see particularly responses incorporating physical actions like falling, flying, objects bursting, of natural forces or of animals. But even in human responses (for example, on Card III) the development goes from linear movement to com-

plex movement, based on a more articulated image of the body. In the tables Ames and co-workers have composed of the content of movement we can see that linear positions or movements such as climbing, running, pushing, standing, show less increase with age than more complex actions like dancing, holding, carrying something, and other movements linking the two figures.

Having examined why *M* production is so weak in younger ages, let us turn to the positive aspect of the question. When does *M* production appear distinctly? It appears when there is a more or less articulated body image and when the subject tends to live inner images by adopting their attitudes or their movements—that is, when he begins to live in his inner world as the preschool child lives in his play, especially in his role play. Playing roles or imagining certain attitudes or actions has its origin in the same need: channeling of inner drives by using an image and adapting the self to it. While the little girl will act out her need for self-approval by playing the role of a princess, the young girl will dream—live and act in mere images some corresponding role in the future. The more she imagines attitudes and actions of her own self, the more she will tend to animate figures with movement in the Rorschach. In role-playing as well as in imagining actions (which are roles at a higher level) the self is the center of the experience.

In cases where the action expressed in the *M* responses is obviously related to the subject's own wishes or ideas, the component of "ego feeling" [14, page 62] will be particularly strong and will indicate strong narcissistic tension. In other cases, where the contents of *M* responses remain within the limits of the usual actions seen by many subjects, their greater frequency can be explained by a greater inner dynamism and the tendency to utilize inner tensions for imaginative productivity.

Thus the capacity of producing *M* increases with growing plasticity of mental structures, with the establishment of an articulated image of man, with a growing independence of imagination from action and a growing use of imagination for integration of drive impulses into the self. So long as the impulses are not connected with the center of the personality (that is, the self) they express themselves in

the Rorschach by motor reactions (manipulations of the cards, beating on them, and so on) by primitive movement responses (such as "pieces are falling, breaking") or by *FM* which can denote all stages from unintegrated to integrated movement reactions.

As imagining is an action—though an inner one—it absorbs mental energy and discharges the tensions that otherwise would be carried out in outward activity. In this sense Rorschach's hypothesis of an inverse relationship between motility and *M*-tendency seems justified. Recently Singer and co-workers [41, 42, 43] tried to determine more precisely the nature of *M* as related to motility. It was stated, for example, that the more active patients in a waiting room gave less *M* in the Rorschach than the non-active, or that subjects, after five minutes of "freezing in place," gave noticeably more *M* than after a normal test introduction. We think that these findings—at least most of them—and the explanations given by the authors fit with our views. But we cannot agree with the idea of a close relationship of *M* and motor-inhibition and motor-control in the sense that, roughly speaking, quiet and self-controlled people are likely to produce more *M* in the Rorschach than very high-spirited people with lively movements. Little motility, good motor-control, or inhibition can occur with or without *M* as can rich motility, vivacity, and tendency to lack of control. So we could observe the development of two very different children—different above all as to motility and its control—both of whom tend to emphasize *M*-productivity, both being capable of "living in imagination," integrating tension into their imaginative life.

For this reason, too, we will not be surprised to find no particular results on *M*-productivity in testing subjects who are wholly given to movement in their daily life: pupils of a dancing-school whom we had examined with regard to *M* showed no difference from other subjects [30, page 339].* According to Rorschach and some of his successors, one should suppose that people with a rich motility and the tendency to express themselves by outward movement, like dancers, would be poor *M*-producers.

* Friedemann [16] also reports experiments with dancers where he did not find any correlation between *M* and motor behavior.

The well established relation between high spirits and *M*-production and depressive states and *M*-reduction also proves that richness of exterior movements induced by good spirits can occur with increase of *M*, as apathy, reduction of movement, the decrease of the whole mental tonus, lead to poor *M*-results.

Summary

The tendency to produce *M* responses in the Rorschach depends on:

1. The mental capacity to change structures.
2. The construction of a differentiated image of man.
3. The integration of impulses into the self.

All three conditions depend on mental growth. With regard to our first question as to the general phenomenon of *M*, we may now formulate: *M tendency in Rorschach is an equivalent to role-playing in the first imaginative stage. It is internalized playing*—that is, playing not only with images of certain objects, but with images of actions and attitudes. Just as playing has the function of channeling inner drive impulses and of satisfying them symbolically, representation of inner imitation of actions serves to elaborate inner tensions and to integrate them into the self. High *M* production may correspond to strong narcissism or it may be mainly related to the dynamic factor and correspond to the vivacity of inner structures.

If these conclusions prove correct, we shall find high *M* production in very flexible intellects and in subjects who live a good deal in their images for creative or for narcissistic purposes. From the genetic point of view we understand why children and poorly-integrated adults use more *FM* than *M*. It is the consequence of immaturity or the lack of an articulated feeling of their own self as the center of their activity.

Conclusions

As we have given a summary to every section, we may limit our conclusions to the chapter to reviewing very briefly the trends followed in our investigations:

1. In a preliminary research, by means of ambiguous figures, we found that the development of the "manner of approach" confirms the law of mental development that was pointed out by Claparède in discussing some problems of perception:
 - a. Globalization (syncretism) and primitive analysis (some marked details are isolated from the whole) ($W, W + Dd$)
 - b. Analysis (D)
 - c. Synthesis ($W + D$)

We showed the importance of the factor of plasticity, which increases with age and explains the growing capacity to perceive more than one aspect of a configuration.

2. We tried to show that these tendencies and their different manifestations could also be traced in the Rorschach, in spite of the greater complexity of the blot material.
3. Our findings seem to suggest the necessity of taking account—more than is generally done—of the aspect of form level. Certainly, all Rorschach experts make use of the term "elaboration" and speak of primitive and differentiated organization, but not explicitly enough.* We do not deny the necessity of scoring $F +$ or $F -$ according to the usual degree of fit with the concept and the frequency of its occurrence. But we believe that the degree of differentiation or complexity, as we pointed out by examples, ought to compliment the traditional scoring work. Many responses like "mountain" or "stick" are not primitive because of inaccurate form, but because of a weak degree of form elaboration.

Of course the tables of norms for popular, frequent, and infrequent responses at different ages (as given by Hertz, Ames, and others) help to establish the form levels.

4. The development of movement responses corresponds, in the order of their appearance, to the general development of reality testing and of the inner world.

Elaboration of the different qualities of the visualized objects indicates the conquest of *reality* in form and color. It precedes

* Klopfer [20] reserves the terms *specification* and *organization* for special aspects of form level.

elaboration of the *inner impulses* and their integration into the self (kinesthetic tendency). The degree of elaboration of color and form, on one side, and the fusion of drive impulses with the self, on the other, give a measure of maturity of the personality. The development shows, when seen in its totality, an increase of all Rorschach determinants and their growing mutual integration.

Though we do not propose to discuss at length the practical application of our point of view, let us mention that genetic aspects not only apply to the degree of elaboration but also to the pattern of reaction taken as a whole. There are records of normal adults showing typical trends of the *Dd* type, which we described as following the first global stage. These types show the same sensual pleasure in picking out definite forms that they do in reacting to color. As far as we know them, they seem to show in real life some typical features of this level.

With regard to the theoretical consequences, we tried to draw attention to the three components contained in the *M* determinant:

- a. The very prevalent factor of "Umzentrierung," a capacity for changing mental structures.
- b. The image of man.
- c. The inner imitation of an image.

We came to the conclusion that *M* tendency corresponds to the tendency in the fiction-play age that gives rise to role-playing and—at a higher level—to imagining actions and roles in images and day-dreams. In all these phenomena the self is acting out, as the central subject, the impulses of the personality, first in close relation with real action and later in the realm of mere imagination.

These considerations are based on exploratory experiments carried out with special figures ("man or object?", "face or object?", and the like) and on direct observations of children's reactions in the Rorschach.

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The Use of the Rorschach Technique in Child Guidance Clinics

The past ten or fifteen years have seen an extension of the use of the Rorschach in child guidance clinics. A combination of several factors appears to be responsible for its more widespread use.

One major influence has undoubtedly been the increase in the number of clinical psychologists who have been trained, some of whom have gone into child guidance work. Since World War II many large universities have established graduate programs to train students in clinical psychology. An important aspect of such training is the understanding and use of projective techniques in a variety of situations. At one time the function of the clinical psychologist was practically limited to the determination of the IQ. Except for offering a little additional information based on his observations of the patient's behavior during the test administration and on certain qualitative aspects of his performance on the psychometric test, the psychologist had little or nothing to say regarding diagnosis or personality characteristics. Today, however, when clinical psychologists are trained in techniques of interviewing and psychotherapy as well as in projective testing and personality theory, they are able to contribute a great deal more to any psychiatric setting in which they find themselves. Working in collaboration with psychiatrist and psychiatric social worker in the clinical team, the clinical psy-

chologist makes an important and unique contribution by his use of projective techniques.

The value of this contribution has gradually come to be recognized by psychiatrists and social workers in child guidance clinics as well as in other kinds of clinical treatment settings, so that more and more frequently they request projective tests or "at least a Rorschach" before diagnosing a case or considering it for treatment. This recognition by other professions of the value of projective techniques is a second factor related to the first as are two sides of a coin. In this instance it appears that the supply has created the demand.

We are so accustomed to regard the psychiatric impression or diagnosis as the final criterion that we sometimes fail to recognize that the psychiatrist is frequently uncertain and puzzled about the clinical data with which he has to deal. He, too, often wants evaluation from another source, either to confirm his own impression or to reveal information he has not been able to obtain from interviews or case history material. Krugman points out that with children the Rorschach can frequently reveal material that cannot be elicited by direct interview and that whereas some children "are greatly disturbed by a psychiatric examination," they can "respond better to apparently innocuous material like the Rorschach." [17, page 511]

A third factor that has influenced the growing use of projective tests in child guidance work is the increased emphasis upon the understanding of dynamic factors in various childhood disturbances. Learning difficulties are no longer held to be exclusively the result of low intelligence; the reasons are often sought in the child's inner conflicts or in his external relationships with parents, peers, or others. Even in those cases where learning difficulties are attributable to actual intellectual deficit, workers are interested to know about personality organization and level of adjustment. As various physical disorders have joined the ranks of psychosomatic diseases, child psychiatrists, psychologists, and pediatricians seek to find the nature of the emotional disturbances in children who develop these diseases. Behavior problems of various kinds were formerly attributed to the child's "constitutional inferiority"; today we are concerned about

why the child has reacted to his life experiences in a particular way and how he has interpreted these experiences. These and other problems, once considered to be outside the realm of "psychic disturbances," have come into the fold along with the neuroses and psychoses to be studied from a psychodynamic viewpoint. Since the Rorschach is an instrument that is based on a dynamic structural approach to personality, it has proved of inestimable value in helping to elucidate the personality dynamics of children who manifest disturbances. Therefore, the Rorschach has come to be widely used in the investigation of such problems.

A fourth influence on the growing use of the Rorschach in child guidance clinics has come from the published studies on children's Rorschachs. Before such studies were done, it was not possible for the practicing clinical psychologist to know whether a particular Rorschach pattern was deviant or within the normal range for a child of a given age. Obviously, he could not use adult standards, and he had no others. In recent years various normative studies [1, 4, 11, 12, 13, 15, 22] have provided at least a base line from which the clinical psychologist can evaluate his Rorschach findings. This has given him a feeling of greater security in using the Rorschach on children in child guidance clinics where the statements he makes about a particular child may have important and far-reaching implications.

In addition to these normative studies, a number of articles have appeared in the literature citing the results of Rorschach studies of children with various kinds of symptoms [3, 6, 7, 8, 19, 20, 21, 29]. These provide, mainly, group data, which are sometimes not too useful for purposes of individual diagnosis. Nevertheless, these reports often contain general qualitative descriptions of the Rorschach behavior of children within a specific diagnostic category, so that they are instructive and helpful in the individual case.

These factors, then, appear to have been largely responsible for the present widespread use of the Rorschach in child guidance clinics. It is clear that they are closely interrelated and interdependent. Our selection of these particular influences on the growing use of the Rorschach and other projective techniques in child

guidance work does not mean to imply that there are not others; but these appear to us to be of outstanding importance.

A Survey of the Use of the Rorschach in Child Guidance Clinics

Since our own experience in child guidance work is limited to a few clinics in the Los Angeles area, we wanted to learn the degree to which this experience paralleled that of other workers in this field. We therefore conducted a survey of a fairly large number of child guidance clinics throughout the United States. We sent a questionnaire to 142 clinics and received a total of 107 replies.

The remainder of this chapter will be organized around a discussion of the results of the survey. Each section will be headed by a question from the questionnaire, followed by a table of results. Since our purpose is to acquaint the reader with the use of the Rorschach in child guidance work, it seems appropriate to base our discussion on how child guidance clinics actually use the Rorschach. The results are on the whole congruent with our own experience with the Rorschach in child guidance settings, and we would like to set forth some of our ideas about the problems involved in the questions we asked. In other words: What are the contributions of the Rorschach to child guidance work? What are its limitations?

What Percentage of Children Brought to Your Clinic Are Given a Rorschach?

Clinics vary in the frequency with which they use the Rorschach as part of the diagnostic study of the cases they consider. Forty-five per cent of the clinics polled use the Rorschach for less than 30 per cent of the children they study; and 19 per cent use it for between 90 and 100 per cent of their cases. We do not know the reasons for this amount of variation, but several possibilities suggest themselves.

In those clinics where a very large number of cases are seen, there

TABLE 1 *Number and Percentage of Clinics by Percentage of Children Given Rorschachs*

PERCENTAGE OF CHILDREN GIVEN RORSCHACHS	NUMBER OF CLINICS	PERCENTAGE OF CLINICS	CUMULATIVE PERCENTAGES
0 to 9	18	17	100
10 to 19	10	9	83
20 to 29	20	19	74
30 to 39	7	6	55
40 to 49	5	5	49
50 to 59	6	6	44
60 to 69	6	6	38
70 to 79	8	7	33
80 to 89	7	6	25
90 to 100	20	19	19
	N = 107		

is rarely sufficient personnel or time to do Rorschachs, or any testing, except on those cases that present particular diagnostic problems. In such clinics, therefore, the Rorschach would be used in only a small percentage of cases. Conversely, in clinics where fewer cases are handled and where each case is given more intensive study, the Rorschach is likely to be more frequently used. Some clinics administer a battery of tests, including the Rorschach, routinely to all patients. In settings where research is being carried on, testing of all cases or of certain categories of cases is likely to be the procedure; as a result, a relatively high frequency of Rorschach usage is to be expected.

Possibly another factor influencing the number of Rorschachs given in a clinic is the attitude of the clinic staff toward this test. Psychologists themselves vary in the degree to which they rely upon the Rorschach for purposes of diagnosis and evaluation. Varying attitudes toward the Rorschach are also found among other professional workers. With psychiatrists and social workers, for example,

appreciation of the Rorschach may depend upon their experience with psychologists and psychological tests. If such experience has not been a part of their background, or if they have only been exposed to psychologists who gave them "cook book" reports, they are likely to be skeptical about the Rorschach, if not actually antagonistic toward it. If, on the other hand, they have worked with psychologists who were able to demonstrate to them the value of the Rorschach and other tests, they are more likely to be interested in testing and sensitive to its value.

Within What Age Range Do You Find the Rorschach Most Useful?

TABLE 2 *Number and Percentage of Clinics by Minimum Age
at which Rorschach Is Considered Most Useful*

MINIMUM AGE FOR RORSCHACH USEFULNESS	NUMBER OF CLINICS	PERCENTAGE OF CLINICS	CUMULATIVE PERCENTAGES
3	5	5	100
4	4	4	95
5	10	10	91
6	13	12	81
7	16	15	69
8	27	26	50
9	1	1	28
10	13	12	26
11	0	0	
12	11	10	14
13	1	1	4
14	0	0	
15	0	0	
16	0	0	
17	0	0	
18	3	3	3
	<u>3</u> N = 104		

Although in our questionnaire, we worded this question: "Within what age range do you find the Rorschach most useful?" we were interested only in the lower limit, since the usefulness of the Rorschach with adolescents and adults is not in question. Our results show that the answers pile up at ages 6, 7, 8, and 10, with 58 per cent of the answers falling within this range.

There is some disagreement concerning the usefulness of the Rorschach with children below the age of 5 or 6. Klopfer states: "As a rule a developmental age of three years provides the capacity for coöperation and understandable verbal expression necessary for significant Rorschach reactions from young children." [16, page 94. See also Chapter 1 of this volume.] However, he agrees with other observers [1, 8, 14, 21] that in the young child the age pattern overshadows individual personality patterns. Ames *et al* [1] provide examples of the Rorschach records of children down to two years of age, illustrating the general characteristics of the perceptual behavior of the young child, and showing the importance of the "age pattern" as contrasted to the more individualized pattern of the older child.

It is certainly important to know how the young child performs on the Rorschach, for on the basis of such knowledge it is possible to gauge the developmental progress of a child and to compare him to others of his age level. It is also useful to have such information when interpreting the Rorschachs of older individuals whose responses may at times resemble those of younger subjects, indicating unevenness in their ego functioning.

For child guidance work, however, we would add a note of caution about using the Rorschach with very young children, since at the early ages so little of the child's individuality is reflected in the test. According to psychoanalytic thinking, we should not expect to find the Rorschach particularly useful for individual evaluation before the age of five or six. Until this age, the child's conflicts have not undergone strong repression; those that exist can most usually be discerned by observing him in play sessions and by evaluating material obtained by interviews with the parents. When the child reaches five or six (latency), however, his conflicts have become internal; his defenses are becoming established; his personality has a more

definite structure. It is after the onset of latency, therefore, that the Rorschach has its greatest usefulness. It can then reveal conflicts and anxiety, as well as the nature of the defenses used against them, which are not directly observable in the child's overt behavior.

Do You Ever Give Rorschachs to the Mothers of Your Child Patients? Yes ____ No ____ If Yes, for Approximately What Percentage of Cases Is This Done?

TABLE 3 *Number and Percentage of Clinics which Administer the Rorschach to Mothers by Percentage of Mothers Who Are Given the Rorschach*

PERCENTAGE OF MOTHERS GIVEN RORSCHACHS	NUMBER OF CLINICS	PERCENTAGE OF CLINICS	CUMULATIVE PERCENTAGES
0-2	20	41	100
2-4	9	18	59
4-6	10	20	40
6-8	3	6	20
8-10	0	0	
10-12	4	8	14
12-14	0	0	
14-16	1	2	6
16-18	0	0	
18-20	1	2	4
20-22	1	2	2
N = 49			

Of the 107 clinics from which we received replies, 49 administer the Rorschach to the mothers of the children who are seen. Of these, 78 per cent give Rorschachs to less than 6 per cent of the mothers; and 41 per cent use it in less than 2 per cent of cases.

It is significant, we believe, that this number of clinics are testing mothers at all, since the use of the Rorschach with adults is a time-consuming procedure. More interesting than the quantitative findings are the remarks many of the respondents included in answer

to this question: "If mothers are given Rorschachs, to what extent are these considered in the total evaluation and recommendations for the case?"

Three of the respondents answered that the Rorschach is given to mothers only when the mother is to be a patient herself or "when the mother's personality is a very important factor in the entire situation." Two others use it only during the course of therapy and not for original evaluation of the case. One person replied that his clinic used Rorschach results on the mother to a minor extent, and two said that it depended on the situation. An additional two clinics use mothers' Rorschachs for research purposes, but not for evaluation and disposition.

The remaining 38 respondents from those clinics in which mothers are given Rorschachs replied in a positive way concerning the usefulness of this procedure. They state that even though they use the Rorschach infrequently with mothers, they consider the results to be highly important to the evaluation of those cases in which they do use it. Some say it is given equal weight with all of the other factors in the case, and others state that it is given more weight than the Rorschach of the child. Several respondents write that Rorschachs of mothers are considered in terms of the treatability of the mother and therefore of the child. Mothers' Rorschachs are also used, according to our respondents, in deciding the type of treatment approach that should be used with the child or in the parallel treatment of mother and child.

A number of our replies included some statement to the effect that Rorschachs would be given to mothers much more often, if there were sufficient time units available for this purpose. Several of the respondents who stated that they did not use the Rorschach on mothers added a note that they were planning or hoping to do so.

The authors have not themselves worked in clinics where mothers were given Rorschachs, but we believe that such a procedure can be of great value, at least in selected cases. There are times, for instance, when a child appears quite disturbed and yet the clinical impression of the mother is that she seems to be a relatively well adjusted individual. It is difficult in such instances to arrive at a clear understanding of the reasons for the child's disturbance. Testing of

the mother might reveal aspects of her personality that are not discernible from interviews. Certainly, it is generally agreed that the mother-child relationship is the primary factor in the adjustment of the child. It would seem reasonable, therefore, not to focus all of our investigation on one side of this relationship—the child—and thereby do a less thorough study of the other side—the mother.

What Theory of Personality Do You Find Most Useful in Integrating the Findings from the Rorschach?

TABLE 4 *Percentages of Answers for the Various Personality Theories*

Freudian Psychoanalytic	62%
Neo-Freudian (Sullivan, Horney, <i>et al.</i>)	14%
Other Dynamic (Learning-Theory, Gestalt, Field Theory)	8%
Eclectic (Psycho-Biological, Bio-Social)	5%
Other	11%
Total number of answers = 115	

The question relating to the theory of personality most useful in integrating the findings from the Rorschach brought forth multiple replies, which we separated into the categories shown in Table 4. Sixty-two per cent of the respondents state that they integrate their Rorschach results in terms of Freudian theory; an additional 14 per cent use a neo-Freudian approach, including the formulations by Harry Stack Sullivan, Karen Horney, and others. Eight per cent use some other dynamic theory, including learning theory, Gestalt or field theory. Five per cent fall in the category of eclectic, comprising the psycho-biological and bio-social points of view. The remaining 11 per cent gave a variety of answers that could not be included under any specific theory; we therefore classified them as "other."

To use the Rorschach most effectively it is necessary to consider it within some theoretical framework concerning personality development and personality dynamics. Without such a theoretical orientation it is difficult, if not impossible, to interpret Rorschach findings in a meaningful and consistent manner. The statements made from

Rorschach results are in the nature of inferences. These inferences are attached at one end to the individual's responses and must be attached at the other end to a theory of personality. In other words, Rorschach responses must be translated into a description of the processes and dynamics involved in producing such responses. These processes and dynamics, in turn, "explain," clarify, or otherwise enable us to understand that patient's symptoms. The particular theoretical framework used is perhaps less important than the consistency with which it is used. A report based on the individual's perception of his "phenomenal field" in which there suddenly appears some interpretation of id impulses striving for gratification is not only confusing, it has little meaning.

In Volume I of this book Holt considers the implications of various contemporary personality theories for Rorschach rationale and concludes that, with all of its present shortcomings, psychoanalysis remains for him "the most nearly adequate and most indispensable body of personological theory that we have." [Volume I, page 535] He points out: "For the most part, Rorschach workers have relied chiefly on psychoanalytic concepts and hypotheses in their daily clinical work . . . without its principles of psychodynamics there would be no mortar with which to hold together the (sometimes too lofty) edifices of inferences that we erect to reach diagnostic and prognostic conclusions about patients." [Volume I, pages 534-535]

A number of our respondents, in their answer to our question concerning theoretical orientation, emphasized their use of the concepts of ego psychology within the framework of Freudian theory. From our viewpoint, in child guidance work it is just these recent developments in ego psychology that have made psychoanalytic theory a particularly meaningful one for the interpretation of Rorschach and other projective material. When we test a child in a clinic, it is less important to describe his unconscious conflicts than it is to understand how he deals with these conflicts. We are interested to know in any given case which areas of ego functioning are intact, which are impaired, and how much they are impaired. We are concerned with the child's ability to tolerate tension, to test reality, to differentiate and organize his experience. We want to know the na-

ture of his ego defenses and how rigidly or flexibly he uses them. We want to gauge his ego strength and his potential for treatment. The conceptual tools that make it possible for us to study these phenomena are derived from psychoanalytic ego psychology. The theoretical foundation for our present understanding of the development and operation of the ego has been provided by the work of a number of psychoanalysts [5, 9, 10, 23]. Others, psychologists and analysts, interested in projective tests, have helped to relate the concepts of ego psychology to the data obtained by these techniques [2, 24, 26, 27].* As Bellak writes:

Projective techniques, like early psychoanalysis, have been primarily steeped in Id psychology, a concern with drives and their expression. Psychoanalysis made its major step when it turned from being solely a psychology of the unconscious drives to a study of the interaction of these drives with the ego. Similarly, it is necessary today that projective testing make this step to fully understand our data and their limitations. [2, page 282]

What Are the Most Usual Reasons for Which a Rorschach Examination Is Requested? (i.e., Differential Diagnosis, Personality Evaluation, etc.)

TABLE 5 *Percentages of the Various Reasons for Which the Rorschach Is Given, as Stated by Respondents*

Personality Evaluation	45%
Differential Diagnosis	31%
Treatment Potential	20%
Intellectual Evaluation	3%
Research	1%
Total number of answers = 190	

To the question concerning the most usual reasons for which a Rorschach examination is requested, the majority of respondents gave more than one reason; and in these cases we counted the number of replies, a total of 190. The emphasis here is on personality

* See also Volume I, Chapters 15 and 16.

evaluation as the purpose for which the Rorschach is given. Forty-five per cent of the answers fall in this category. Thirty-one per cent also use it for differential diagnosis; and twenty per cent for evaluation of treatment potential, prognosis, and progress in treatment. Of the remaining 4 per cent, 3 per cent use the Rorschach as a means of determining intellectual potential or to check the results of psychometric tests, and 1 per cent use it for purposes of research.

Personality Evaluation and Diagnosis

Children are brought to a child guidance clinic for a variety of reasons. They have learning difficulties or are disciplinary problems in the classroom. They are withdrawn and do not mingle with other children. They cannot get along with parents or with brothers and sisters. They are aggressive or act out in anti-social ways. Some are referred because of physical symptoms for which no organic basis can be determined. Others manifest neurotic symptoms such as phobias, tics, nightmares, or enuresis. These, and a myriad of other complaints, are the kinds of problems with which the child guidance worker has to deal.

In some cases, the symptomatology is clear-cut and the basis for the difficulty may be understood from interviews with the parents and the child. Frequently, however, the picture is equivocal and it is not clear from the case history material why a particular child shows a certain reaction. In such cases, the Rorschach, as one instrument in a test battery, can prove of value by revealing aspects of the child's personality that throw light on the clinical picture he presents.

The Rorschach is often requested for the purpose of differential diagnosis. The psychiatrist or social worker who has seen the child is not sure, on the basis of the history and symptoms, what diagnosis to make. Or there is disagreement among staff members concerning the nature or severity of the child's disturbance. There are certain kinds of differentiation that are useful and for which the Rorschach can be helpful. For example, the Rorschach may reveal unsuspected strengths or weaknesses of the ego and in this way aid in distinguishing between a psychotic and a neurotic illness. However, as Halpern

points out, it is seldom possible by means of the Rorschach to differentiate between various neurotic manifestations in children, or between character deviations and neuroses, since these disturbances usually occur in combination.

The fact that most emotionally disturbed children show both character deviations and neurotic symptoms also makes differentiation among various groups of maladjusted children by means of the Rorschach a difficult, if not impossible, task. They all show emotional disturbances, but these disturbances take a variety of forms in the test, as they do in life. [8, page 112]

This limitation does not vitiate the value of the Rorschach, for the most important information that can be provided concerning a child who comes for psychiatric evaluation or treatment is that which helps us to understand his dynamics and the way in which his personality functions—and this is precisely what the Rorschach is equipped to supply. Our survey indicates an emphasis on the use of the Rorschach for personality evaluation in a majority of the clinics polled; and in our opinion this consideration cuts across diagnostic categories and is of much greater significance in our attempts to help the child and his parents. It is a matter of everyday observation that individuals with similar symptoms vary greatly in their underlying dynamics and, conversely, that individuals with similar dynamics exhibit a variety of symptoms. Therefore, the diagnostic label, although necessary at times, is by no means of the same importance as a dynamic description of the functioning personality.

The question of differential diagnosis becomes more imperative when it is necessary to distinguish between a possible psychotic or pre-psychotic condition and a less serious disturbance, or between mental deficiency and psychosis. This is so because the kinds of recommendations that a child guidance clinic will make concerning treatment and disposition will largely depend on diagnosis, when a possibility of psychosis exists.

A number of considerations may enter into the recommendations made in the case of a schizophrenic child. The nature of the environment must be carefully considered to determine if the child's interests are best served by letting him remain in the home or plac-

ing him elsewhere. If he is to remain at home, or in a foster home, and receive outpatient treatment, it is important that he have a therapist who is equipped to work with seriously disturbed children. It is also necessary in such situations that the real or foster parents of the child receive careful guidance to enable them to coöperate in the treatment program. The type of treatment approach used, the frequency of visits, and a number of other factors will differ for psychotic and non-psychotic children. These are but some of the reasons that make the problem of differential diagnosis a more crucial one than when the nature of the disturbance is obviously less severe.

When the symptomatology is frankly psychotic—bizarre, autistic behavior, mutism, posturing—the clinician does not need a Rorschach to make a diagnosis. However, there are many cases in which the illness is more subtle; it is in these cases that the Rorschach can be of real value in helping to determine whether or not a schizophrenic process is involved.

Although we have been discussing the matter of childhood schizophrenia as though it were an accepted "fact," we are nonetheless aware that there is controversy concerning the question of whether or not severe ego disturbances in children can justifiably be called psychoses. It is not our purpose here to discuss the various opinions and arguments that have been advanced for and against the concept of childhood schizophrenia. We merely wish to point out that the child guidance worker must sometimes deal with children who are so severely disturbed that they require certain special kinds of treatment and management. Regardless of the term used to describe these children, the severity of their ego disturbances must be recognized. Since, as we mentioned above, ego defects of this magnitude have far-reaching therapeutic implications, their determination is crucial and can often be illuminated by means of the Rorschach test.

Treatment Planning

A third major category of reasons for which the Rorschach is used in a child guidance clinic, according to the results of our survey, is that of treatment planning. Since the chief function of a child guidance clinic is to help children who are psychologically disturbed in

one way or another, all that is done in the way of diagnosis and evaluation is aimed toward the goal of understanding how best to perform this function. Depending upon the diagnostic evaluation, this help may take the form of direct treatment of the child, counseling of the parents, environmental manipulation, or some combination of these therapeutic measures. As one element in the case study required for evaluation, a Rorschach examination can be a valuable contribution. It can help to point up the relative assets and liabilities in the child's personality and thus provide some guide for treatment recommendations. The Rorschach is also frequently used as a means of evaluating the progress of children who are in treatment, and of helping to determine when treatment can be terminated.

Child guidance clinics usually study more children than they can possibly treat. Careful selection of cases must be made in order to assure that those taken for treatment are the ones most likely to respond favorably. Thus the question of treatability is a most important one. Krugman states that psychiatrists often admit that they do a good deal of guessing about this, and he goes on to say: "The Rorschach has proved extremely useful for this purpose, and psychiatrists . . . who rely on this method firmly believe that it leads to a better choice of treatment cases." [17, page 507]

Psychologists in the field of child guidance [18, 28] have been able to correlate Rorschach indicators with improvement or non-improvement in treatment, and have offered these indicators as prognostic criteria for the selection of treatment cases. These various prognostic criteria may be helpful to some degree in selecting from a group of children those who will be most likely to benefit from psychotherapy. However, in studying the individual case, such indices do not take the place of expert clinical judgment and an understanding of the individual Rorschach in the context of other test material, the history, and the total constellation of the child's family relationships and his social environment.

The child has little control over external conditions. He cannot exchange his parents for more suitable ones nor leave them and strike off on his own. Frequently, his only way of fighting back

against those who make him unhappy is through his symptoms. Therefore, the decision as to whether or not a particular child is a good therapeutic risk does not rest entirely on factors within the child himself. It is necessary also to appraise the possibility of changing a home situation or a parental attitude; for, without the coöperation of those upon whom the child is dependent, even relatively good therapeutic results with the child will not be permanent. In this appraisal the mother's Rorschach can be a valuable aid. The need for the coöperation of the parents is a factor that often makes the selection of cases in a child guidance clinic a much more complicated matter than it is in a clinic treating only adults.

The Rorschach can help us to gauge the degree of the child's anxiety and the defenses he uses against it; the Rorschach can help us to appraise the strength of his ego; the Rorschach can tell us how he perceives his world and how he responds to it. To know these things is important; but we must judge the possibilities of change, not only in the child himself, but in the real world to which he is asked to adjust before we can provide the help for which he was brought to a child guidance clinic.

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The Application of the Rorschach Technique to Geriatrics

Preliminary Considerations

The application of the Rorschach technique to aged individuals presents certain special problems of administration related to the normal physical and mental changes that take place in the aged. One of these problems relates to the decreased visual acuity characteristic of patients of advanced years. This may, in part, account for some of the characteristics of the Rorschachs to be discussed in the following section. If an individual is unable to clearly perceive the blots, the form of his responses may become more vague; and more opportunity for concept-dominated rather than blot-dominated responses may arise. In this connection, it would be wise to have some estimate of the visual accuracy of the individual at hand so that the interpretation of the form accuracy of the responses may be modified accordingly. Old people also show certain characteristic motor changes upon occasion. It is difficult to estimate the extent to which these will influence a perception of the Rorschach ink blots, but they will influence the self-concept of the individual in general. Old people often show increased reaction time and a general slowing down of perceptual processes, which will also be reflected in their performance on the Rorschach test.

More important than any of these are the characteristic personal-

ity changes that take place during the senile period. As will be discussed in greater detail below, old people show certain distinct personality problems secondary to the general lowering of self-esteem and the feelings of inferiority that result from the real mental and physical deterioration often occurring during this period. Special pains must be taken to establish the type of relationship with the aged subject that will result in a maximally useful performance on the test. Old people are often garrulous; thus they need to spend a good deal of time getting acquainted with the examiner prior to being able to concentrate on the task at hand. If the examiner demonstrates sufficient patience, he will find that old people respond rather readily to attention and to kindness and will be glad to co-operate in any effort he suggests. The test must be presented so as to be interesting to them and related to some of their own objectives. These might include a program of treatment for them, an assignment to some useful type of activity, or a screening device for participation in individual or group psychotherapeutic sessions.

It is very important for the psychologist working with the aged to overcome his own biases against old people. It is unfortunately characteristic of our culture, as opposed to some others, to tend to look down on old people because of the fact that the contributions they can make to our society are often different in nature than those made by younger adults. It has been this writer's experience that graduate students and interns, when entering a clinical setting in which old people have to be examined, often express a distinct preference for examining younger individuals, who are "more interesting." This is in spite of the fact that old people often need help very badly and respond very readily to any sort of attention on the part of professional individuals. Furthermore, the whole field of geriatrics is a field so lacking in adequate research—so little is understood about the normal personality patterns of old age—that any young psychologist would do well to concentrate on this area if he wishes to make inroads into a new and hitherto unexplored area of human behavior. Once the psychologist is used to working with old people and has seen the enthusiasm with which they respond to his attentions, he will find it easy to overcome his bias. There is no doubt

that the productivity of the patient on the Rorschach test is greatly influenced by the degree of enthusiasm shown about his productions on the part of the examiner. In doing clinical work with the aged, it should be the responsibility of the psychologist to examine closely his own feelings about old people and to try to work them through so they will not interfere with his professional efficiency in this very important sphere of clinical endeavor.

In the following sections some standardization studies on the aged population will be reviewed. Some protocols will be cited to illustrate specific conditions of the senile period. Finally, some suggestions will be made about the ways in which Rorschach results can be practically applied in the case of the aged patients.

Review of Standardization Studies

The few studies that have been done of the patterns of Rorschach responses given by the aged population show a remarkable degree of consistency in results. The two most complete ones are those by Davidson [1] and the present author [2]. This section will also refer to the study by Prados and Fried [4], as well as an unpublished study by Slosson [5].

Klopfer studied 50 subjects over 60 years of age. Of these, 30 were drawn from a home for aged and infirm in New York City. This institution contains inmates from a wide range of socioeconomic levels. Their educational and vocational backgrounds varied considerably. Admission to the home required physical and mental fitness. The median age was 74. The 20 non-institutionalized subjects came from a miscellaneous group of sources and were chosen to be roughly equivalent to the institutionalized group in socioeconomic background. **Their median age was 73.**

Davidson studied 46 subjects from the same institution. Some were referred for clinical purposes and some were tested for research purposes alone.

Quantitative Characteristics

All studies are consistent in indicating that old people give a small amount of *M*. Klopfer found that 62 per cent of his cases contained 1 or 0 *M*, and Davidson discovered that the mean amount of *M* for her group was 1.6. *FM* has been found to be consistently higher than *M*. This is true in Klopfer's group in 70 per cent of the cases and Davidson's in 66 per cent. Responses scored *m*, *k*, *K*, and *FK* have been found to be negligible in the studies by Klopfer, Davidson, Slosson, and Prados and Fried, *F* is above 50 per cent in all studies. Responses to texture are underemphasized, averaging 1.3 in Davidson's study, 0 to 1 in Slosson's, and about 1 in Klopfer's. Color responses are usually one of two kinds: either color is completely absent, or there is apt to be an excess of *CF* and *C* responses over *FC* responses. In Klopfer's study the number of *CF* exceeded the number of *FC* in 67 per cent of the cases in which there was a response to color. In 64 per cent of the total cases, however, there was no reaction to color at all.

Specific data on populars were given only by Klopfer, who found that only the animals on Card II and the winged creature on Card V, in addition to the animals on Card VIII, were given by 50 per cent or more of the responding subjects. The caterpillars and the rabbit's head on Card X were given by less than 5 per cent of the subjects and therefore can hardly be considered populars in this population. Of the remaining popular responses three were given by between 25 and 50 per cent of the group. These were the winged creature on Card I, human figures on Card III, and the crabs on Card X. Many of the old people refer to the usual human beings as birds with the lower "leg" area left off. When asked during the testing of the limits procedure whether they could accept the usual human figures, a number of subjects pointed to the small white space between the leg and body parts and stated that human beings could not be broken up. This perception of human details in the light of an inability to see the whole figure approaches a tendency toward seeing oligophrenic details.

In regard to the manner of approach, all studies discovered that

this population tended to overemphasize *W* at the expense of *D*. Klopfer expresses it in terms of a percentage, saying that 76 per cent of the population overemphasized *W*. Davidson expresses it in the form of the average number of *W*, which indicates that in her study also this was overemphasized. The quality of the *W*'s referred to is vague rather than organized. Accompanying this overemphasis on *W*, there was an underemphasis on *D* in 60 per cent of Klopfer's subjects.

In regard to content, animal per cent was shown to be over 50 on the average in all studies reviewed. According to Klopfer's data, it was over 50 per cent in 70 per cent of the patients studied.

The average number of responses was small, being 15 in Davidson's study and 14 in Klopfer's study. The average time per response is listed by Klopfer as long, being 49.3 seconds.

In summary, regarding the quantitative characteristics of the aged population on the basis of the studies reviewed, there seems to be considerable constriction, indicated by an underemphasis on color and movement responses and an overemphasis on form responses. Those movement responses given are primarily of the *FM* variety. Responses of the *m*, *k*, *K*, and *FK* variety are all present in very small amounts. Reactions to color are unlikely to be present; but if they are, they are more likely to be of the uncontrolled variety. The manner of approach most characteristic is overemphasizing *W* at the expense of *D*. Content is apt to be stereotyped, with an overemphasis on *A* responses.

Qualitative Observations

Klopfer noted nothing particularly unusual about the behavior during the testing situation of this population. All subjects were polite and coöperative. However, Davidson points out that many subjects were unsure of themselves, self-depreciatory, cautious, or afraid of being wrong—often needing approval and reassurance.

Intellectual impairment is frequent in this population. Many of the old people indicated by some of the concepts they form that they had once had intellectual ability at a higher level. This impression was gained through their organization of the blot material in some

cases or from the level of their vocabulary and other Rorschach factors and was corroborated by a past history of achievement and success. When the old people were asked to give further responses during the testing of the limits procedure, and generally put more at ease by encouragement and praise, their performance showed remarkable improvement in a number of cases.

Their intellectual approach was likely to be evasive and in some cases was illogical and uncritical. A large number of subjects had particular difficulty in organizing their experiences or engaging in higher or more abstract types of mental activity. Their intellectual ties to reality were often in doubt because of the vagueness of the responses; but in some cases the responses were peculiar and bizarre. Their thought content was likely to be more limited and stereotyped than is the case in the normal population.

Quantitative data mentioned above indicate that most of the subjects were unable to make much use of their inner resources as a means of adjusting to their environment. In regard to their relationships to other people, most of the subjects showed some form of difficulty. In spite of the fact that many of them showed considerable need for affection and attention in the content of their responses, most of them did not seem to possess the ability to form satisfactory relationships with others as shown by their difficulty in giving responses integrating form and color together. There were indications of sexual interests in many of the patients, illustrated by sex responses and reactions to "sexual areas." (See Volume I, Chapter 13.) The sexual role playing and identifications seemed much less clear than is the case ordinarily. Old people frequently gave human responses on the cards without specifying the sex; or they would call one figure a man and one a woman, even though these figures were identical. Their emotionality as judged from their reactions to color on the Rorschach Test tended to be egocentric, uncontrolled, and overdependent (44 per cent of the Klopfer group) or inhibited, guarded, and withdrawn (30 per cent). Hardly any of the subjects showed strong responsiveness to the finer nuances of the environment represented by the shading. On the basis of a comparison of Rorschach data with the history of these patients, Klopfer noted that a number of the

subjects presented an exaggerated version of their previous personality traits during the senile period.

Summary of the Personality Patterns of Old Age Based on the Rorschach Test

The summary given in the following paragraph is adapted from Klopfer [2]. It seems thoroughly consistent with the other studies cited.

In the intellectual sphere these aged persons are generally slower, less productive, and less efficient than individuals of equivalent capacity in the general population. Though they are still able, for the most part, to deal adequately with the practical problems of everyday life, they have a great deal of difficulty in organizing their experiences for future reference; and they are not interested in abstract and theoretical things or in the formation of original ideas. This loss of intellectual efficiency is the result, in most cases, it appears, of emotional disturbances that are either created by the problems of the ageing or are accentuations of problems present throughout the individual's lifetime. Moral support tends to give aged persons greater security and thereby raises the level of their performance. If we are to assume that psychiatric symptoms essentially serve the purpose of re-establishing homeostasis within the organism by alleviating the anxiety produced by loss of self-esteem, we can see that the real loss of potency characteristic of increased age would exacerbate them. The special problems of these old people seem to make it somewhat difficult for them to think along the lines conventionally accepted by the population as a whole. Thought content in general is rather restricted and often approaches stereotypy. Intellectual ties to reality are adequate in most cases but somewhat loose. The old people's capacity for making use of their inner resources appears to be diminished. When they do respond to promptings from within it is to the more primitive, suggesting a regression to a more infantile level of functioning. There is no consistent way in which they respond to emotional challenges. Some of the old people are egocentrically labile and highly responsive. Some, on the other hand, do not respond at all to affective stimuli. Most of this group may have

the same basically egocentric emotionality, but they rigidly inhibit their reactions. Some show their basic responsiveness by reacting to the finer emotional stimuli stemming from the environment. Most of the old people in the group do not have good mechanisms for relationships with others. They are critical of other people and find it difficult to make social contacts.

Some attempt has been made to compare those old people who are in institutions with those who are on the outside. Klopfer did not find any significant differences between the two groups. Davidson, however, in comparing her findings with those of Prados and Fried [4] suggests the following differences between the two groups:

1. The institutional group has lower energy output and less drive than the non-institutional group (lower R , lower $W\%$).
2. The institutional group shows greater rigidity of the personality than the non-institutional group (more cases showing $F\%$ greater than 50), and less spontaneity (lower FM , fewer cases showing FM greater than M).
3. The institutional group shows less emotional responsiveness than the non-institutional group (lower color scores).

Davidson deduces from this that the institutional group is assuming the personality characteristics of the aged prior to the non-institutionalized groups. It may be that further study of non-institutionalized aged subjects would reveal further differences. Certainly the institution from which both Klopfer and Davidson drew subjects is not a representative one. It would be desirable to do further normative work, perhaps concentrating on those aged individuals who are contributing something tangible to society.

Differential Diagnosis within the Aged Period

The only writer who has made any suggestions along these lines is the present writer in the paper [2] cited above. He has demonstrated four cases (not included in the normative study) presumably illustrating certain characteristic patterns of pathology in old age in terms of the Rorschach. Two of these will be briefly cited.

Case I (male, age 77)

Rorschach Record

CARD I

PERFORMANCE

5"

1. A certain animal in the water.
2. Two mice.
3. A tropical tree.
4. The head of a wolf or dog.
5. Two wings of eagle.

1' 10"

INQUIRY

1. I don't remember where I saw it.
2. Two mice (upper inner *d*) standing up—they look up.
3. In Texas they look like that—have big leaves are sticky (?) look as though they would stick (?) the shape. (*W*)
4. Here it is. (Upper side projections)
5. One on each side. (Side projections)

CARD II

PERFORMANCE

10"

1. Two—well—it looks like two in the circus—clowns in red hats. Hands together.

45"

INQUIRY

1. They are wearing masks (?) have kind of a rat nose. (Bottom *D*?) No relation. They are squatting down. (Men or women?) Men, hats more like men's.

CARD III

PERFORMANCE

5"

1. In comical picture—two men shake hands—monkey man.
2. Necktie in the middle.

55"

INQUIRY

1. Two old-fashioned caricatures. Hats here (top) faces. They're holding a butterfly.
2. A lady's bow—shaped that way. The color is nice.

CARD IV

PERFORMANCE

10"

1. Looks like a gorilla without a head. The tail is not like a tail.

1' 20"

INQUIRY

1. An orang-utan. Tail is not right. The head is ducked down. Here are the eyes. (?) The way it's formed. (*W*)

CARD V

PERFORMANCE

10"

1. Looks like a butterfly—something like that. Here are the legs and there are the wings.
2. Face like an animal—monkey or something.

55"

INQUIRY

1. A butterfly. (*W*) It's still—not flying.
2. A rabbit's face. (Top *d*)

CARD VI

PERFORMANCE

I never saw this kind of animal.

20"

1. A cross.
2. Animal like lives on trees. Don't know name or how to express it.

1' 15"

INQUIRY

1. A cross (top *D*), or knife like the Indians use.
2. Not really like it.

Add. Open skin of a certain animal.
Inside scraped off. (*W*)

CARD VII

PERFORMANCE

3"

1. Like two ladies' faces. Hair up like in my time—look like ears of rabbit.

40"

INQUIRY

1. Women. Just the head and the hair. There are the mouths. (Top *D*)

Add. Mountain with waterfall. (Bottom *D*) (?) Rushing down.

CARD VIII

PERFORMANCE

10"

1. Flags.
2. Two bears or dogs—something like that.
3. Butterfly.

30"

INQUIRY

1. Can't see it now.
2. Two animals. (?) Just there. Four legs. (Usual)
3. Butterfly. (Bottom *D*) It has no head, though.

CARD IX

PERFORMANCE

8"

1. A candelabra.
2. On both sides—figures of different animals—don't know what.

50"

CARD X

PERFORMANCE

Never see that . . .

10"

1. That one looks like a spider.
2. That one looks like two birds.
3. That one looks like birds too.
4. Candelabra on the top.

1' 10"

INQUIRY

1. A candle. (Usual center *D*)
2. Phantasy nose and mouth here on head. I never saw any such animal. (Upper orange *D*)

INQUIRY

1. (Usual side blue *D*) Shape.
2. Here are two birds with heads like guinea pigs. (Side brown *D*)
3. In the middle standing with their legs like that. (Center blue)
4. Here. (Top *D*)

Add. Two lice (top) or a lice here and a monkey on the other side. They tip the candle.

Testing the Limits

(Bottom *D* in Card X look like anything?) Two heads of snakes tip the candelabra.

When the cards were divided into achromatic and colored piles, the subject was unable to name the difference until it was pointed out to him. He liked the achromatic cards better. Card I was the best because it had "more stuff" than the others. The worst was Card X, because it was "least understandable."

Interpretation and Discussion

The subject seems to have above average intellectual capacity, and in no case does he function below the average level of efficiency. His approach is practical and realistic, but he has some difficulties in organizing or profiting from his experiences. There is no problem in respect to the ability to adjust along conventional lines. Thought

content is somewhat stereotyped, however, and the subject is not capable of forming superior original ideas.

The subject's emotional reactions are considerably inhibited. The picture of an individual with a basically spontaneous emotionality who tends to withdraw when stimulated is sometimes referred to as the "burnt child" constellation. This subject shows a definite capacity for aggression, both in the general social and the specific sexual sense, but tries to inhibit or sublimate it. There is a preoccupation with impotence, represented by the "lice tipping a candle" response.

Life history of the patient reveals that he was never able to make a satisfactory social adjustment. He married, and was separated from his wife after a short period. The reason for this that he gives is that his wife was unfaithful to him. This, upon further examination, turns out to be a form of projection. Up until twelve years ago, he resorted to prostitutes for sexual gratification. Since then, his libido has apparently diminished. His relationships with other inmates of the institution have been extremely unsatisfactory. The Rorschach shows that the subject still retains a strong heterosexual interest, but his attitude is withdrawn and hesitant.

The psychiatric diagnosis was *senile maladjustment*. This case illustrates the fact that psychopathological conditions present throughout an individual's lifetime may be exaggerated during the senile period to the point where they actively interfere with his ability to adjust to his environment.

Case II (male, age 62)

Rorschach Record

CARD I

PERFORMANCE

25"

1. Ain't that a potted flower what spreads out on both sides?

2. I think it's more of a butterfly.

1' 15"

INQUIRY

1. I seen things like that in the field. (?)

2. (?) Head is on the top. Body is in the center. Settled. (W)

CARD II

PERFORMANCE

10"

1. This reminds me of a pair of donkeys that fight one another. (Laughs)

40"

INQUIRY

1. A duel. I think this is the heads—they come together on the top (?) upper part of the body in the center is the—body (?) hindquarters. (*W* without upper and bottom *D*'s)

CARD III

PERFORMANCE

10"

1. Looks like two boids (*sic*) looking at one another.

25"

INQUIRY

1. (Laughs) Funny-looking creatures. (Just upper *D*) Head with long neck. (Center *D*?)
Add. In the field—in the grass—they meet each other for a duel.

CARD IV

PERFORMANCE

Oh!—8"

1. Two monkeys. (Laughs)

25"

INQUIRY

1. The center is the body. Heavy woolly material they have on their body. Either side. Head is white spot. Legs is body and spread out. Is hairy like human being. Some human beings have no hair on their body at all. (*S* asked to draw concept, has a very difficult time, states: I shake so much that I have to eat by myself in the smoking room.)

CARD V

PERFORMANCE

10"

1. Another butterfly what spreads wings on both sides.

30"

INQUIRY

1. (?) The head must be around this part. The butterfly—when she get mad—she blows. (*W*)

CARD VI

PERFORMANCE

5"

1. A butterfly spreads out a wing.

15"

INQUIRY

1. Head can't be this—is right here, where she spreads out body—some goes east, some goes west. (*W*)

CARD VII

PERFORMANCE

10"

1. Two women having a scrap.

15"

INQUIRY

1. They standing here, right here in the gate of somebody's house. (Women are *W*, center *dd* is gate) Looking at each other.

CARD VIII

PERFORMANCE

10"

1. Another butterfly—same way.

15"

INQUIRY

- Add.* These lovely animals . . . I guess they climb up the tree where the butterfly come out. (Side and top *D*)
1. Butterfly is right here in the middle. Spread wing and open up in two ways.

CARD IX

PERFORMANCE

15"

1. Another butterfly—same way—looks so natural.

30"

INQUIRY

1. I guess butterfly is in the center—right here, and she throws her chemical stuff here—some right, some left. This is the field where the butterflies come out. (Center area and bottom *d*)

CARD X

PERFORMANCE

10"

1. All butterflies—every one of them.

INQUIRY

Add. All kinds of monkeys that want to climb up. (Top *D*)

Add. Here are the flowers that are blooming (pink *D*) great scenery.

1. These are butterfly—the blue ones. (Side blue *D*)

30"

Testing the Limits

(Bottom *D* in Card X look like anything?) Just to make clear the scenery. (Caterpillars?) Might be an owl seen years and years back. (Referring to top *D*)

(Bottom *D* in Card IX look like anything?) Strawberry. (Man's head?) More like a child's head.

(*Aobj* in Card VI?) Don't know—I saw them years back where a cow was killed and the skin was taken any old way. When animal is sick and they take the skin off with a knife—looks woolly, hairy.

(Center *D* in Card III look like anything?) Any animal can, if he wants to sit down.

Interpretation and Discussion

This subject was confused during the test and had difficulty in concentrating on the task at hand. Motor coördination was markedly impaired. He was born in Holland and has lived in New York for 62 years, engaged mostly in the laundry business. His wife died recently and, prior to his entrance into the Home, he lived in a furnished room by himself. His medical record shows a diagnosis of cerebral arteriosclerosis (Parkinson's Syndrome), as well as general arteriosclerosis, hernia, psoriasis, and varicose veins.

The Rorschach shows that the subject must have had at least average intelligence at one time. At present, however, there is so much vagueness, confusion, and disassociation that intellectual ties to reality seem definitely inadequate. His approach to problems is uncritical and impractical. Although the subject is emotionally responsive, his affective reactions are often inappropriate to the stim-

uli producing them. There is a great deal of undirected aggression together with an inability to accept or identify with other people. There is an inner "looseness" in the personality equivalent to the "shaking" in the body.

This case illustrates the intellectual and emotional disintegration that takes place as the result of cerebral arteriosclerosis.

The foregoing brief descriptions indicate that it is possible to distinguish a minor disturbance from a more serious one within the aged group. They are not intended to be guides for diagnosis, since they are not based on research but are merely illustrations of some work done by the present writer. However, the most important contribution that can be made by this chapter to the subject of diagnosis in the aged is the standardization data presented in the preceding section. The normal personality at an old age, revealed by the Rorschach Test in the standardization studies, would be characteristic of some kind of organic or neurotic condition if applied to a younger individual. It is extremely important for the psychological clinician in evaluating the Rorschachs of older people to evaluate pathology, not in terms of the deviation of the aged Rorschach from a young adult norm, but in terms of the deviation from the norm cited above. It would be extremely important to do further research in this area to determine whether any characteristic differences exist between the various kinds of pathological conditions characteristic of the aged.

The Applications of Rorschach Findings on the Aged Population

Rorschach results, in the case of old people, are of extreme importance in all institutions in which old people reside. This includes not only homes for the aged but also state hospitals, nursing homes, and various and sundry other institutions of this kind.

The first purpose of such tests might be differential diagnosis, as suggested in the preceding section. Although not enough work has

been done at this time to propose that the Rorschach test be used routinely as a means for distinguishing various conditions of the senile period from one another, this is certainly a possibility the future holds.

The second purpose for which the Rorschach results of old people might be used is for planning a program for them within the institution. Whether they be sent to occupational therapy or given various jobs to do within the institution, what kind of recreation they might enjoy, are things that can be gauged in part from the results of projective devices. Those with a great need for status could be given tasks designed to make them feel important; those who are lonely could be encouraged to join group activities; those with practical skills should be given an opportunity to use them. One thing that we have learned from some of the material cited above is that old people are not anywhere near as homogeneous, or as difficult to deal with, as is popularly believed. They do have certain particular emotional problems characteristic to them, but these can easily be handled. If their individual needs can be gauged and met through the use of the Rorschach, then the Rorschach will indeed have made a major contribution to their happiness.

Another use of the Rorschach in an institutional setting would be for the purpose of rehabilitating older people enough to enable them to return to their communities, if possible. Certainly many oldsters have sufficient emotional and intellectual strength to serve some useful purpose to society outside of an institution. This strength could be gauged from their ability to constructively organize their perceptions on the Rorschach, particularly by integrating affective and rational elements. Here, again, it is possible for the Rorschach to make a contribution to the field of geriatrics.

Lastly, the Rorschach would seem to be an excellent device for further research into the question of personality patterns of old age. One need only look into some textbooks on the subject to discover the gross ignorance prevalent in the field about the personality of older people. It is generally assumed that these older people are like children or like people in the latency period, or that they have no instinctual drives and so no sexual interests. Even the limited

amount of work that has been done to date is enough to contraindicate all of these rather absurd hypotheses. The community (of which the psychologist is an important part, and often a leader) should recognize its responsibility to shorten the lag between the medical research that has permitted people to live longer and the psychological research that would make their declining years pleasant ones, rather than having them characterized by the stresses and strains often present during this period of life.

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Part Two

Medical Psychology

- CHAPTER 8** The Clinical Situation
- CHAPTER 9** Methodological Research Problems
- CHAPTER 10** Differential Diagnosis
- CHAPTER 11** Diagnosis of Organic Brain Damage
in the Adult
- CHAPTER 12** Diagnostic Case Studies of Male Adults
Having Organic Brain Damage

The Clinical Situation

The distinction between clinical diagnosis and a description of the personality organization called "structural diagnosis" has been discussed in *The Rorschach Technique* [1], especially in Chapter 2 and Chapter 13. A valuable further contribution, describing the absorption of the interpretation process into the clinical situation, has been made by Schafer [2], especially in his analysis of "Interpersonal Dynamics in the Test Situation" (Chapter 2) and his "Interpretation of Defenses" (Chapters 6 to 10). The basic problems and processes of Rorschach interpretation have been described in Part Two of Volume I of the present work.

Instead of summarizing and continuing these theoretical attempts to delineate the role of the Rorschach technique in clinical situations, this chapter will use the "candid shot" approach. A series of actual clinical situations will be presented in order to demonstrate and emphasize the need for flexibility in the use of our interpretative hypotheses and processes.

Before plunging into the case situations which form the main substance of this chapter, it might be well to point out some of the traps that often ensnare the unwary Rorschach interpreter when first confronted with clinical situations. First, there is a great temptation to "show off" what a useful tool the Rorschach technique is by giving blind interpretations of Rorschach records in order to impress other clinicians with diagnostic inferences, possibly even with discoveries of hidden disease processes such as psychotic disturbances or brain

lesions. Such a stunt performance is certainly possible in many cases, particularly where the test has been administered with all necessary care and refinement; but it is justified only in very specific research and training situations. In all other instances blind interpretation is frankly unethical, since it either violates the interests of the patient, the interprofessional relations with the clinical team, or both.

Two other traps derive from this exhibitionistic tendency. One is the inclination to overemphasize the pathological elements in the total picture and to neglect the ameliorating factors—namely, the indications of constructive ego strength.* The other trap is the tendency to infer patterns of overt observable behavior from the skeleton picture of personality without knowing the actual life situation and the case history of the individual. Both of these latter two dangers have been demonstrated in a particularly lucid manner in the case of a severely arthritic veteran who was submitted for a rehabilitation consultation to the authors.

Case 1

Case History

Mr. A is 34 years old, married, and the father of a month-old daughter. He is 6 feet, 2 inches tall, weighs about 200 pounds, and is a personable-appearing individual. He has been disabled from rheumatoid spondylitis and chronic arthritis since 1940. For the past nine years there has been a complete ankylosis of the hip joints which renders it impossible for him to assume a sitting position. There is also a complete ankylosis of the spine. Although there could be no reassurance that his condition would be improved, surgery was performed on the left hip joint November 2, 1954 at the patient's request. The procedure was designed to permit some motion in the hip joint. A similar operation was performed on the right hip, January 20, 1955. During the period immediately *prior* to the second operation a number of psychological tests were administered.

* See also Schafer [2], page 157.

Of French-Irish extraction, Mr. A was born on the outskirts of a midwestern agricultural community, the eighth of ten siblings, four boys and six girls. The father (an undertaker) died after a five-year illness, when the patient was ten. The mother then became the main support of the family, working in truck gardens, picking crops, and at other unskilled jobs. Despite the family economic situation, eight of the children graduated from high school, the oldest boy completed a pharmacy course, and the youngest girl is continuing college work while teaching school. Two of the girls married men of professional standing. The patient's brothers having previously left, he was the only male in the home after his father's death.

Having "skipped" lower grades, Mr. A entered high school at the age of 11. He feels that he was not mature enough, physically or socially, to profit from high school studies or other activities. A growth spurt ensued when he was 15, and the following year he played football and first evinced an interest in girls. From the age of nine his ambition was to become a forest ranger but he was unable to finance an education beyond high school. While attending school he had worked for a dairy; upon graduation he worked as a farm hand and service station attendant for 2 years. He enlisted in the Navy in 1939 at the age of 18, and served about a year before the onset of rheumatoid arthritis. Since that time he has been virtually unemployed but has completed a correspondence course in bookkeeping and learned to do leather work, though finding the latter unremunerative.

Two and a half years ago, Mr. A married a widow whom he had known for five years. Mrs. A, also 34 years old, has 2 children by her first husband, a boy of 11 and a girl of 7. Her child by the patient was born during his recent leave from the hospital. Mrs. A was an institutional cook and continued her work for 9 months after they were married, while Mr. A did the cooking at home. He demonstrated a real interest in his stepchildren and he feels that he is fulfilling their emotional needs. Mr. A receives a disability compensation and his wife has a small income. By close budgeting, he feels that they can continue to get along financially.

Medical History

Except for measles and "yellow jaundice" in childhood, Mr. A states that he had been in excellent health until the onset of his present illness, August 30, 1940. At that time he was on board ship in the Pacific Theater. Initial symptoms, which appeared suddenly, included: elevated temperature, inflammation of the throat, and painful swelling of the knees, but without redness of the joints. Under physical therapy and symptomatic treatment for four months his condition improved, but he was transferred to a hospital in the United States for further care. Examination showed that the entire body musculature was somewhat atrophied as a result of rheumatoid arthritis. He was discharged from the Navy in March, 1941 with a diagnosis of "chronic arthritis, polyarticular, moderate." Because of the progressive severity of the pain and his increasing helplessness he entered a Veterans Administration Hospital six months later. Within a short time he was bedfast and could assume almost no care for himself. He was hospitalized for four years, during which time his condition appeared to become stabilized, with ankylosis of the spine and hips and impairment of the shoulders, knees, and right hand. He became able to stand and move about with the aid of a walker for brief periods of time and could partially care for himself. Surgical procedures were considered at that time but it was felt that no improvement could be expected and the patient was discharged in May, 1946. His disability compensation was increased and he was allowed special compensation for an attendant. He had no further medical treatment until admitted to this Veterans Administration Hospital, September 17, 1954.

No radical changes in the patient's condition were observed upon current examination. The diagnosis is specified as "rheumatoid spondylitis and severe chronic multiple arthritis." There has been some increase in motion in the extremities but increasing ankylosis in the spine and hips. The head could not be laid flat on a table or bed. Because of the rigidity of the hips he could not use a chair but was able to walk with a walker and, for a short distance, with two canes. He could dress and care for himself fairly well but could not put on

his shoes. A car which serves as his chief means of transportation, although he cannot operate it, has a specially built slant-seat on which he rests.

Surgical procedures were considered, the aim being to increase the degree of flexion in the hips by a two-stage operation. Although no confident assurance of a favorable outcome could be given, Mr. A requested that surgery be performed. The first stage was performed on November 2, 1954, consisting of the insertion of a femoral head prosthesis and plastic surgery on the left hip joint. Recovery was uneventful and the patient was sent home December 12, 1954, on a 30 day leave. He was readmitted, January 11, 1955, preparatory to the second stage of the operation. (It was at this time that the psychological tests were given.) Surgery was done on the right hip, January 20, 1955; and, although the post-operative course was more difficult, one week later he began standing in his walker and engaging in other activities. He left the hospital February 19, 1955. The surgeon's opinion was that Mr. A will be able to sit with normal motion, it being expected that he will develop about 90 degrees forward flexion. The extent of ambulation he will acquire is uncertain.

Rehabilitation

Soon after Mr. A's present hospital admission, the ward physician requested consultations by the Vocational Counseling and Physical Medicine Rehabilitation Services. Physical therapy was instituted for mobilization of the right shoulder, and to prevent further musculature atrophy. Occupational therapy was prescribed for diversion, to keep the hand joints mobile, and to explore possibilities for a future hobby shop. Following interviews with a counseling psychologist, several "interest tests" were administered, typing lessons were begun in the Educational Therapy Section, and the Manual Arts Therapy Clinic began exploration of mechanical and allied skills. It was planned at this time that, following surgery, instruction in algebra would be started by an educational therapist, the course to be continued by correspondence after discharge from the hospital. Mr. A initially expressed doubt as to the value of attempting to make vocational plans. This attitude stemmed partly from discouragement but

appeared to be chiefly attributable to his lack of familiarity with rehabilitation facilities. (Physical Medicine Rehabilitation Services is a relatively new field, having been instituted in Veterans Administration Hospitals following World War II, which was after the patient's previous hospitalization.)

Mr. A at first expressed some opposition to psychological tests, but this was readily dissipated through discussion. The "interest tests" seemed to stimulate him and, following his brief leave from the hospital, he agreed to take the battery of projective tests. These were all administered during the week immediately preceding surgery on his right hip. Three additional tests of a more objective type were also given because he was eager to have them, partly to give him "something to do."

Since his disability was incurred during peacetime, he is not eligible for any veterans' educational or training benefits and, because of his compensation, it is doubtful that he will be entitled to assistance, other than counseling, from the State Bureau of Vocational Rehabilitation. It can readily be seen that any attempt to reach a decision regarding a definite vocational goal within these five months was inadvisable. However, the probable value he has gained from counseling and physical medicine rehabilitation lies in the opening of new horizons by providing him experiences that have given him a better knowledge of his capacities and of the community, educationally and vocationally. It appears that he will be able, on his own if necessary, to continue his vocational planning toward satisfying goals that will be compatible with the physical status he ultimately achieves.

Summary of Test Results (Tests other than the Rorschach)

All of the projective tests were administered in a private room on the hospital ward. Mr. A stood in his walker for the MAPS Test, the Draw-a-Person, and for such Wechsler-Bellevue sub-tests as required the use of his hands. A board placed on the walker served as a table top. The figures for the MAPS Test were placed on a bed beside the walker. For the other tests the patient leaned back in the walker, strap devices enabling him to gain some relief from the strictly upright position. The Performance Scale of the Wechsler-Bellevue was

administered first, to avoid the effects of fatigue. As he manipulated objects, his movements were tremulous and spasmodic, reflecting his impaired musculature. A minimum of explanation was given regarding the tests. Mr. A coöperated readily and seemed thoroughly involved in the tasks.

Wechsler-Bellevue Intelligence Scale, Form I

Mr. A achieved a Full Scale IQ of 127, placing him at the upper end of the superior range. Despite his handicap in manipulating objects, the Performance score is less than 10 points below the Verbal. Interest scatter is minimal. Both of these findings point to emotional stability, an individual whose efficiency is unimpaired by neurotic defenses. The fact that his scores on Information, Comprehension and Vocabulary are in the very superior range, though he has but a high school education, is indicative of a strong intellectual drive. This suggests a character make-up that is primarily obsessive, but these traits are not sufficiently rigid to stifle spontaneity. His verbalizations are not pedantic, impulsive, or pretentious. He can "afford" to guess at answers but there is no arbitrariness, strain, or looseness. Definitions are quite exact but he uses the vernacular unhesitatingly and flashes of humor are evident. There is some unevenness of achievement in Similarities. Following the first four rather stereotyped abstractions, his conceptualization descends to a functional level. When, on the last few pairs, it becomes difficult to give acceptable answers on that level, he produces excellent abstract concepts. This would seem to indicate a practical-mindedness, not a lack or impairment of the capacity to abstract. The drop of the Digit Span score 5 points below Information and Vocabulary reflects tension and anxiety, but it is felt that this is a temporary inefficiency directly attributable to the imminence of surgery. For the same reason, the drop in Picture Arrangement does not appear pathological. On this test Mr. A said, "I was looking for some fun," but he was in no condition to be easily amused. It is probable, also, that this sub-test reflects the fact of his width of experience having been markedly restricted. Depressive features might be expected, but his perform-

ance on Object Assembly and Digit Symbol (on which he had to lift his body to move his arm) contraindicate such a finding.

Thematic Tests

Productions on both the TAT and the MAPS Test are somewhat meager. Mr. A stated that he "didn't like to make up stories" and, in many instances, his responses are almost entirely descriptive. Nevertheless, some information can be gained. Cards 1, 2, 10, 8 BM, 13 MF, 6 GF, 14, and 17 BM were used in that order. On the six cards that picture more than a single figure, the situation is seen as involving family relationships. The content is not shallow; it involves sorrow, work, struggle, and frustration, as well as joy and contentment. Individual roles are well defined, with the male being the dominant figure, engaged in masculine pursuits, yet tender in his relationships to the female. Women are helpmates, sharing in both joy and sorrow. Child figures are neither damned nor deified. It is as though the patient's motto is, "In the family there is strength." He is sufficiently comfortable to face the aggressive implications of the material—for example, on 8 BM, the boy accidentally shoots the father, a realistic treatment. Authority figures are accepted as such, without resentment or over-submissiveness. On card 10, involving illness, he states that the outcome is unknown as yet. This appears to be directly referable to his own situation. On the following card (8 BM) he says, "It's a crucial moment, hanging fire." He then makes a considered, not a blithely optimistic, decision that the ending will be happy. One gets the impression of strength, of the ability to "take it," whether or not operative procedures are successful. On card 14, though the response is purely descriptive, the young man is represented as acceptant of life's challenge and determined to make a success. Card 17 BM brings out the patient's need to excel intellectually since he cannot achieve physical prowess, though the latter seems more attractive to him.

On the MAPS Test, scenes are neither over- nor under-populated. The choice of figures is rather wide, appropriate to the stories, and properly imposed on the backgrounds. His productions are restricted by his alert perception of details in the backgrounds and his

need to be exact in dealing with them. When, however, the background is nebulous (as in the Dream and Blank scenes) he easily uses fantasy figures and incorporates them into appropriate stories. When given the Blank card he expressed gratification at the opportunity to manipulate the whole situation. It is significant that he then chose figures which incorporate such masculine attributes as strength, courage, aggressivity and daring, combined with tenderness and sentiment. While he has to relinquish the hope of embodying these attributes in his own person, he sees himself fulfilled through his hoped-for son. This may also be referable to the lack of a strong father figure in his own early development. In the Street scene he is not overly righteous toward man's frailties, and in the Shanty (which he chose) he again demonstrates a knowledge and acceptance of the fact that corruption exists. His choice of the shanty and ready use of the idiom in relating the story probably reflect a not altogether "angelic" past. The Bridge scene brings out a suicidal theme but it is not disguised; again he faces the situation without the neurotic need for defenses. Another indication of the patient's adjustment is his acceptance of appropriate nudity in the child and female figures. In his Medical production he appears to equate doctors with bad news, but this is common in the general population and would deserve remark only if Mr. A failed to do so.

Draw-a-Person

The patient drew both figures readily and appeared to enjoy the task. He used fairly light, cartoon-like strokes in creating a male figure which he called "Fatso." The figure is a profile view about eight inches high, facing left and near the left edge of the paper. "Fatso," both as depicted and described by Mr. A, is happy-go-lucky and beginning to put on weight. The female figure is almost identical in size and position on the paper. Both figures are clothed. The male is said to be in his late 20's or early 30's, and the female "must be 35, no young chicken." In neither drawing do the essential features appear to be unduly emphasized or ignored—with two exceptions, and these are identical in the two drawings. First, the arms are abnormally short, reaching barely to the waist. Second, both figures

are drawn with only one leg. In view of the otherwise well-executed drawings, these two features seem significant, not from the viewpoint of psychopathology as related to body image, but from the standpoint of the influence of physical handicap. As a result of his disability, Mr. A's range of arm extension is considerably below the normal. Therefore, he has lost sight of the extensibility of the normal arm. While to physically normal persons, legs provide a means of ambulation, to him, they have long since become almost forgotten appendages, secondary to more mechanical means of locomotion. Had he, in making the drawings, felt the need to be defensive, these features might not have appeared. Thus, confirming the findings on other tests, the drawings seem to indicate a high degree of adjustment to his unusual situation.

Interest, Achievement, Aptitude Tests

Considering Mr. A's long-time desire to become a forest ranger, both the Kuder Preference Record—Vocational, Form BB, and the Strong Vocational Interest Blank, Form MM, suggest stability of interests. While his interest pattern was more like occupational criterion groups other than Forest Service Man on the Strong, this category was within the significant range. His highest scores, all in the A range, were Printer, Aviator, and Farmer; scores on all the so-called related criterion groups were significant; and on the Engineer and Chemist scales, scores are also positively related to necessary training for forestry. Other significant scores were obtained on the scales for Dentist, Veterinarian, Production Manager, Senior CPA, and Accountant. Scores on the Kuder Mechanical and Scientific scales were significantly high, with significant scores on the Computational, Artistic, and Literary scales. The "outstandingly high" scores on the Economic and Theoretical scales in the Study of Values tend to substantiate the preference for the practical, as seen in the "earthiness" of the Rorschach, but with a desire to understand the reason, plan or design. The only "outstandingly low" score, Religious, suggests the reason, perhaps, that marriage between him, raised a Catholic, and his Lutheran wife has created no problem.

The total score on the Michigan Vocabulary Profile Test, Form

BM, was at the 74th percentile as compared with first year college students. Highest scores were in Government, Human Relations, Sports, and Biological Sciences. His lowest were in Mathematics and Physical Science, more difficult to acquire without formal education or active experience.

In contrast to his low vocabulary score on Physical Science, the patient placed at the 57th percentile when compared with engineering school freshmen on the Bennett Mechanical Comprehension Test, Form BB. In view of his lack of training and work experience, this score represents a high capacity for understanding various types of physical and mechanical principles and relationships.

Mr. A placed at the 17th percentile when compared with college and adult art school students on the Art Judgment Section of the Meier Art Test, which purports to measure one of the six factors that are needed to create works of art. This would appear to limit him in achieving any outstanding success in the field despite his demonstrated proficiency in certain artistic areas.

Rorschach Record, Case I

(Note: Cards were held in this Δ position during the entire test.)

CARD I

PERFORMANCE

S: What is the name of this other than
Ink Blot Test?
E: Rorschach.

2"

1. I get the impression of people dancing. Could be a square dance or like found in the folklore of peasants—at least of earlier times.

15"

INQUIRY

1. You've seen groups doing square dances or folk dances. Here is the head dress, arm swinging out, feet. The third one here in the middle is sort of bowed, here are her feet. They must have the middle one by her elbows—all swinging.

CARD II

PERFORMANCE

2"

1. These are two bears dancing. I must have dancing on my mind. Is that enough? . . . That's it.

10"

S: Did you ever live in a cold country?

E: For a while.

- S: These remind me—when I was in the 3rd grade in Minnesota. You know how in cold weather the window panes would be covered with frost? The teacher asked us to tell what we saw on the window panes, one morning. I talked, for a long time—ten minutes I guess—all sorts of things. Never so much any other time. Was really wound up, I guess.

INQUIRY

1. I more or less ignored the red spots. Here's the heavy body—it's the back view with their heads turned some.

CARD III

PERFORMANCE

1"

1. Two colored women cooking in a pot. Might be primitive people—like portrayed in the National Geographic.

15"

INQUIRY

1. Here's the breast—that's why I said women, the face is of negroid type so might be primitive, and here's the pot.

CARD IV

PERFORMANCE

2"

1. Hide stretched out. It's a skin of an animal. Whoever's done the skinning has done a poor job of it (pointing to lower middle part).

30"

INQUIRY

1. Here's the neck, the front, legs, the back legs. Why I said it had been careless skinning, this looks as if the knife had slipped and cut right through.

E: Anything else about it that gives impression of skin of an animal.

S: Yes, the shape. (Moves hand over much of ink blot.) The shagginess gives the impression of hair. (Points to edges at top of "boots" and side edges.)

CARD V

PERFORMANCE

1"

1. This is a bat in flight. That's it.

10"

INQUIRY

1. You've seen bats flying or pictures of them. They usually spread out like this. Here are the ears and the two legs and two feet—perfect for little legs. Even out here it has the edges on the wings that are characteristic. Looks a little bit like a mouse head but the ears and the whole thing makes a good bat in flight.

CARD VI

PERFORMANCE

3"

1. If I hadn't said hide once, I'd say this is a hide—a skin of an animal.

2. This looks like a wood-turned bedpost on it—like a piece of furniture put on it. It's stretched out.

15"

INQUIRY

1. Practically the same as before. Here—this dark part is like you often see running down the center of a skin from a center streak of blood.
2. And as I said, this part is like a wood-turned piece of furniture—a bedpost.
E: How much are you including?
S: All of the blot. Up here could be part of the face. You see the way it is with leather, like when I'm working with it, I'll lay something down on it. It's the shape, mostly that gives me the impression of a skin.

CARD VII

PERFORMANCE

10"

- 1 & 2. Oh, this looks like a piece of primitive sculpturing. Or it could be a scene as you'd see in nature, sometimes where the rocks have been carved by erosion, wind, and rain.

35"

INQUIRY

1. Here's the headdress, the face, this shading as well as the shape makes it look negro or primitive type. Here's the arm.
2. And of course this is the base.
E: Any more about them?
S: I'd say women of course because of this headdress and hair. Have you been to Bryce Canyon?

INQUIRY (*continued*)

E: No.

S: Well the rocks and rock formations there look like sculpturing. You can see many things. It's from the erosion.

E: What about it makes you think of rock?

S: Well it's the roughness like soft rock, especially up here (top—head part), the edges, and the shading here, too. (Used same shading as for the sculpturing.)

CARD VIII

PERFORMANCE

10" huh

23"

1 & 2. Two animals climbing a tree.
Probably two gophers.

INQUIRY

1. The animals are eating. Something like squirrels or gophers but the tails aren't long enough for squirrels. I'll call them gophers.

2. And this could be an evergreen tree but it isn't really tall enough for an evergreen. The animals are standing on their hind legs.

E: What about it makes you think of animals—gophers and a tree?

S: The shape. You know how we used to draw Christmas trees in school? Pyramid shaped.

E: How much are you using?

S: All of this—general idea of a tree.

CARD IX

PERFORMANCE

10"

1. Map of something, United States, maybe.

30"

INQUIRY

1. Well, it's like the east coast of the United States—not very good but if you use your imagination, this could be Florida, the way it juts out and Newfoundland up here and some of the lake—lake area. Not so much a picture of the west coast.

E: Where do you see this?

S: Just like this. This could be the Gulf of Lower California—not good and San Diego'd be about here—it isn't good. If I saw anything up here (upper orange and part of center), it'd be like islands in the Pacific. These parts jutting out.

E: What about over here?

S: Just the reverse, like a reflection of the other side.

E: How about this part (lower pink).

S: That's nothing to me.

CARD X

PERFORMANCE

10" Laughed.

15"

1. Looks like the bottom of the sea when seen through clear water.
2. Here are crabs.
- 3 & 4. And these might be various kinds of crustaceans, I think they're called.
5. And this is coral.

INQUIRY

1. to 5. If you've ever looked through clear sea water, this looks a lot like it—the colored coral and the other animal life. These'd be crabs and these might be crabs or crayfish. These might be amoeba, I think they're called, I'm not familiar with the word—the little one-celled animals. The blue is definitely crabs.

Testing the Limits

Best liked: Cards X, IX, I; Cards X and IX because of color and Card I because of "the composition."

CARD III

E: Some people see a bow here.

S: I can see a red bow. If anything, I'd rather call it a modernistic butterfly. It's too large for the picture, though. And these might be gourds hanging up. Natives I understand make use of them. They could have been painted red.

CARD II

E: How about the red here.

S: It doesn't mean anything to me.

E: Some see this (pointing to lower red) as blood.

S: Yes, but it would have to be two bears fighting, then; being aggressive.

CARD IV

- E: What kind of a skin might this be?
S: Well, I don't know what kind of an animal but one with hair.
E: What makes it look like hair?
S: The light and dark shadows.
E: Could it be fur?
S: It could be fur.

CARD VI

- E: How about this one?
S: This is more like leather—not fur. Where the other one is—well, this is not shaggy like the other. I think the reason it looks like skin to me is because I handle skin so much when I do leather work.

CARD IX

- E: Could you tell me a little more about what makes it look like a map of the United States?
S: It's something like a relief map—mostly just the East Coast, Florida, and on up the East Coast, Newfoundland and could be lake, what is it—Lake Winnipeg.
E: It is more than the United States?
S: Well, maybe North America. But it's just this part—the green, I mean. Not so good on the West Coast but general idea.
E: And this part—lands.
S: Could be. It makes me think of coral. I didn't like this, did I?
E: I think this is one you like.
S: Wasn't there another colored one? Could I see them?
E: (Showed him X, IX, VIII, and I.)
S: Yes, this was one of the three. I didn't pick this one. I know (VIII). These prongs and edges make me think of coral (upper orange).
E: How about the color?
S: It's the shape more than the color.
E: And this part (bottom pink).
S: Not, not that. That's nothing to me.

CARD X

- E: Some see these as caterpillars.
S: Yes, could be. Thought about calling them sea worms.

Four sheets from the *Individual Record Blank* * for this case are reproduced on pages 231 to 234. Discussion of the case continues on page 235.

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SCORING LIST

Card No. and Number of Response	Time and Position	Location		Determinant		Content		P-O		Card No. and Number of Response	Time and Position	Location		Determinant		Content		P-O	
		Main	Add	Main	Add	Main	Add	Main	Add			Main	Add	Main	Add	Main	Add	Main	Add
I	15"																		
4.0 (1)	Λ 2"	W		M		H													
II	10"																		
3.0 (1)	Λ 2"	WX		FM		A		P											
III	15"																		
2.5 (1)	Λ 1"	WX		M		H		P											
IV	30"																		
3.0 (1)	Λ 2"	W		F → Fc		Aobj													
V	10"																		
3.5 (1)	Λ 1"	W		FM		A		P											
VI	15"																		
3.0 (1)	Λ 3"	WX		F	Fc	Aobj													
2.0 (2)	Λ	D		F	Fc	Obj													
VII	35"																		
3.5 (1)	Λ 10"	D → W		Fc		(Hd)													
2.0 (2)	Λ																		
VIII	50"																		
2.5 (1)	Λ 23"	D	} W	FM		A		P											
3.0 (2)	Λ	D		F		N													
IX	30"																		
2.0 (1)	Λ 10"	D ← WX		F		Geo													
X	60"																		
3.0 (1)	Λ 15"	W		CF		Geo		P											
1.0 (2)	Λ	D		F		A													
1.5 (3)	Λ	D		F		A													
1.5 (4)	Λ	D		F		A													
1.5 (5)	Λ	D		CF		Ad													
4'30" = Total Time																			
2.5 = Average Form Level																			

[2]

CASE 1 Scoring List

TABULATION SHEET

TABULATION SHEET

LOCATION

DETERMINANTS

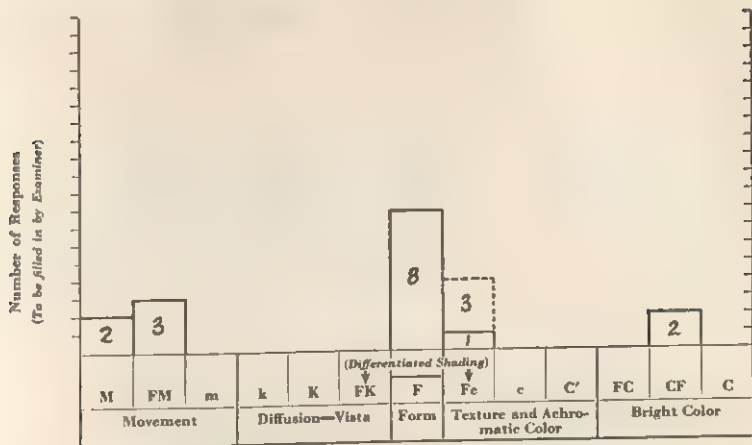
CONTENT

POPULARITY-ORIGINALITY

Scoring Symbols		Number of Card																				Total	
		I		II		III		IV		V		VI		VII		VIII		IX		X		Main	Add
		Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add		
W	W	I						I		I						I						7	2
	W																						
D	DW												I	II		I				III		9	
d																							
Dd	dd																						
	de																						
	di																						
	dv																						
S																							
Main Total		I	+	I	+	I	+	I	+	I	+	2	+	2	+	I	+	I	+	5	=	16	
M		I				I																2	
FM										I						I						3	
FD(m, mF Fm)																							
K(A, F Fh)																							
K(K, Kf)																							
FK																							
F	F*																						
	F							I				II				I				III		8	
F _r	F _r																						
	F _r							I				II	I									1	3
c(c, F, F)																							
C(PC, C'P, C')																							
FC	FC																						
	FC																						
CF	CF																						
	CF																			II		2	
C	C																						
	Cn																						
	Cdra																						
	Ceyra																						
Main Total		I	+	I	+	I	+	I	+	I	+	2	+	I	+	2	+	I	+	5	=	16	
H		I				I																2	
Hd																							
A										I										III		6	
Ad																							
Aoh													I							I		2	
At																							
Sex																							
Ob																							
P																							
N																							
Geo																							
Art and Des																							
Arch																							
Emblem																							
Clouds																							
Blood																							
Fire																							
Mask																							
Abstract																							
Main Total		I	+	I	+	I	+	I	+	I	+	2	+	I	+	2	+	I	+	5	=	16	
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[3]

CASE 1 Tabulation Sheet



RELATIONSHIPS AMONG FACTORS

Total Responses (R) = 16

Total Time (T) = 4'30" (270")

Average time per response ($\frac{T}{R}$) = 16"

Average reaction time for Cards I, IV, V, VI, VII = 21"

Average reaction time for Cards II, III, VIII, IX, X = 33"

Total F = 47 F%

 $\frac{FK + F + Fe}{R} = 58\%$ $\frac{A + Ad}{R} = 41. A\%$

Number of P = 5

Number of O =

(H + A) : (Hd + Ad) = 8 : 2

sum C = $\frac{FC + 2CF + 3C}{2} = 2$

M : sum C = 2 : 2

(FM + m) : (Fc + c + C') = 3 : 1

No. of responses to Cards VIII, IX, X = 47%

W : M = 7 : 2

Succession:

☐ Rigid ☒ Orderly ☐ Loose ☐ Confused

(Place a check mark at the appropriate point on the scale above)

Estimate of Intellectual Level

Intellectual Capacity

Very Superior
☒ Superior
 High Average
 Low Average
 Dull Normal
 Feeble-minded

Intellectual Efficiency

Very Superior
☒ Superior
 High Average
 Low Average
 Dull Normal
 Feeble-minded

Note that this estimate is based mainly on the following:
 number and quality of W
 number and quality of M
 level of form accuracy
 number and quality of O
 variety of content
 succession

Manner of Approach

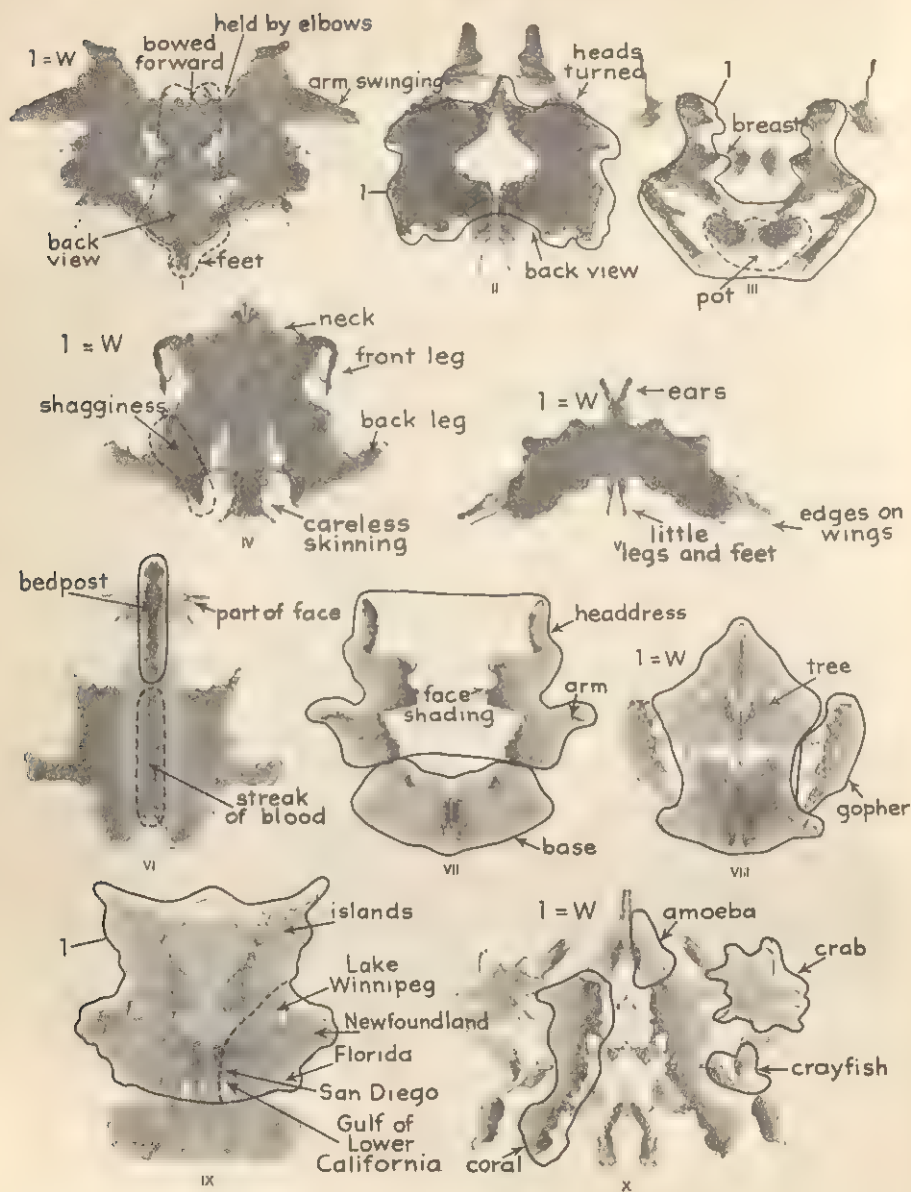
W (42 %) D (58 %) d (0 %) Dd and S (0 %)

Enter the location percentages in the spaces above. Compare these percentages with the norms shown in the box below, by placing a check mark opposite the appropriate range of percentages.

W	D	d	Dd and S
< 10% ((W))	< 30% ((D))		
10-20 (W)	30-45 (D)	< 5% (d)	< 10% Dd S
20-30 W	45-55 D	5-15 d	10-15 Dd S
30-45 W	55-65 D	15-25 d	15-20 Dd S
45-60 W	65-80 D	25-35 d	20-25 Dd S
> 60 W	> 80 D	35-45 d	> 25 Dd S
		> 45 d	

[4]

CASE 1 Summary of Quantitative Relationships



CASE 1 Location Chart

There is certainly nothing about the tabulation of scores that appears grossly abnormal. The only minor imbalances are presented in the slight reluctance in admitting the use of texture as a determinant and the lack of control in the passive use of color. If we pretend not to have seen the case history, we might be inclined to interpret these two imbalances as minor adjustment difficulties of a rather dependent individual who is hesitant to accept his dependent needs. The hypotheses underlying such an interpretation are correct, but how stupidly they would be applied if we took the statements blindly as a description of the patient's personality and behavior.

In studying the case history, we discover that the emotional passivity is functioning as a remarkable adaptation to an almost unbearable physical handicap. The reluctance to accept his dependent needs serves as a useful brake, which prevents the patient from indulging to freely in "secondary gains" from his disability.

Sequence Analysis

The impression of the patient's unusual adjustment capacity is further strengthened in the analysis of his responses. The freedom with which he accepts the movement implications of the first three cards reflects the inner resourcefulness and self-sufficiency of this 34-year-old man who has been severely crippled almost from the time he entered adulthood. He combines his imagination with his logical thinking quite smoothly by giving most of the important specifications without losing himself in details.

In Cards IV to VII he uses the obvious connotations of the material, including the shading elements, displaying only a slight reluctance in accepting shading as a determinant, as mentioned previously. The "soft rock" mentioned in the inquiry to Card VII can serve as a special illustration of his anticipatory feelings.

The color in the last three cards disturbs him very little. He steers clear of using it in Card VIII, even though the "evergreen" reveals his interest in color. In Card IX the problem of whether or not to use color becomes more noticeable. Even in testing the limits he goes only so far as to say, in regard to the "coral," "It's the shape more than the color." Finally, in Card X, he gives in twice to the color

stimulus, first as a total impression then specifically in regard to the colored coral in the very last response.

After the performance proper he immediately chooses Card X and IX as his favorites because of color. He is quite ready to use the red spots in Card III for colored objects, but reluctant to see "blood" in Card II. Interestingly enough, he accepts the suggestion only on the condition that he may relate the blood to the rest of the card.

In summary, what might have looked—on the basis of a superficial blind interpretation—like the picture of a mildly disturbed individual is revealed as the picture of a severely handicapped person who shows quite remarkable ego strength in adjusting to his condition.

Case 2

In some clinical situations the case history and the clinically observable behavior are insufficient to yield a clear-cut diagnostic picture for planning therapy or any other disposition. A diagnostic test battery is requested for clarification. Sometimes even a seemingly meager Rorschach record within such a battery suffices to crystallize the picture.

To illustrate this approach, there is the case of a 37-year-old man of superior intelligence (W-B IQ 127) who has never been known to do anything antisocial or bizarre, but has managed nevertheless to be an almost complete failure in all major spheres of living. He has no emotional ties to any relatives or friends, he has never worked longer than nine months at any one job—and that only at a menial level—he has never come close to a girl, and his only form of sexual gratification is masturbation, which worries him somewhat. At the same time, this man has shown exceptional skill since early adolescence in manipulating all sorts of special agencies to provide for his care. He finally managed to have himself accepted in an installation of the Veterans Administration, where he performs simple tasks like janitorial work. To illustrate his tendency to adjust at the most limited level of functioning, he requested a transfer from a job as a janitor in one laboratory to the same job in another lab. He stated

that in the first lab there was a female employee who, in his own words, did nothing to bother him, but her presence sufficiently aroused him sexually that his masturbatory activity increased, and he thought that was not good for him. All this was brought forth in the most polite and friendly manner.

A look at his Rorschach record should provide some clue as to the personality organization behind this strange life history.

Rorschach Record, Case 2

CARD I

PERFORMANCE

1"

1. A bat, the outline anyway.

15"

INQUIRY

1. Without these two 'wings.' It's the outline of it. Well, actually, you got the tail on the bottom. They do have two feelers, they can't see at all, they fly by sound . . . (describes bat's method of detecting objects).

CARD II

PERFORMANCE

2"

1. Hm, could be, well, part of the body.

10" (denied)

INQUIRY

1. Did I say a part of the body? . . . In a way it reminded me of a stomach outline. It's been so long since I've seen the outline of a stomach . . . you wouldn't call it a rich outline. The color throws me off. I've taken art in school and have always had trouble.
2. Well, it does look like the skin of an animal without the coloring on the top and without the coloring on the bottom. If you black out the coloring it would look very much . . . (Blot?) Well actually it's the outline of the skin itself without the center. I know of no animal that would have so much empty space in the middle when it's skinned.

2. Could be the skin of an animal—stretched out.

PERFORMANCE (*continued*)

3. Could be an outline of a map on account of the space in the middle.

1" (rejected)

CARD III

PERFORMANCE

3"

1. Well, that definitely reminds me of the structure of the bones, from the hips down.
2. Also the features, the outline here could be the outline of a crab, the head, pinchers.

1' 45"

CARD IV

PERFORMANCE

3"

1. Well, that definitely looks like the skin of an animal stretched out to dry—looks very much like a squirrel.

30"

CARD V

PERFORMANCE

5"

1. This here confuses me, not confuses, but most unique. The outline of an animal skin hung up to dry. Could be form of—form of a bat very easily. But as close as I can come to it.

1'

INQUIRY (*continued*)

3. Map? I thought it was on the other one. No, no, I have to take that back. Don't know what made me say that.

INQUIRY

1. (See chart) Stomach, testicles, legs. (Bones?) Yes. (These parts included?) The coloring I don't recognize at all.
2. Actually the same structure. About half the body. It would look more like a crab if this were filled in. (Space between "bow" and lower "mask")

INQUIRY

1. A little bit to be filled in would make it just like a squirrel skin. (See X's on chart.) (Skin?) The outline as it shows on the card.

INQUIRY

1. The whole thing. (Skin from blot?) Well, to me it just looks like the outline of a bat itself, just to look at it, of course.

CARD VI

PERFORMANCE

2"

1. That reminds me of a beaver skin. Definitely.

15"

(Puts card down, picks it up again)

INQUIRY

1. Yes, it does resemble the beaver type. It's more the male beaver than the female. It takes in the whole outline. (Male?) It's hard to explain without having the skin to show you. The female beaver . . . she has a . . . it's from the front of the shoulders, the front legs, the head is shaped different from the male.

CARD VII

PERFORMANCE

14"

1. Well, it's definitely not different but the outline looks like the skin of an animal, but I have no idea what it could be.

2. Another thing it could be is an island surrounded by water, with a bay, an inlet.

1' 5"

INQUIRY

1. Well it does in one way, in another way it doesn't. Looks like parts of it is missing. Should be a head on it.
2. Could be an island or group of islands with a bay in the middle, coves, as they call 'em.

CARD VIII

PERFORMANCE

35"

1. Let's see, distinctly outlined on each side could be moles, a type of animal.

2. A center, a center consisting of . . . looks like the frame of an animal except for the color. The skin looks a bit moth-eaten. The color, I can't figure that out.

1' 35"

INQUIRY

1. These colors starting to throw me out again. The way they have it painted here looks like the outline of head, body and legs, even a mouth, nose, looks like an eye. (Painted?) It's just the body of it, the body of the animal itself.
2. (Skin, moth-eaten) This here, if you've ever seen material moths have attacked. The bottom part . . . I don't know what that is.
Add. Looks like a coat of arms of English nobility. Just the outline, and the way it is there.

CARD IX

PERFORMANCE

1. Hm, they get harder. (Laughs)

15"

Well, just offhand, it reminds me of a species of flower—it's not exactly the outline of an orchid but similar to it.

45"

INQUIRY

1. Yes, reminds me of a species of flower but just what kind I can't say. But the formation, the coloring, the bulb, or core of the flower itself. You know how tulips are—the color changes in the inside. Well, it's like that . . . the color is different. It looks like a flower I saw in northern Australia—not quite like it but almost. It was a poisonous flower.

CARD X

PERFORMANCE

30"

1. Well, offhand, on the right and left looks like a couple of crabs, that is the blue.
2. Others remind me of parts of flowers, but just offhand . . . I can't . . . that's it.

1' 25"

INQUIRY

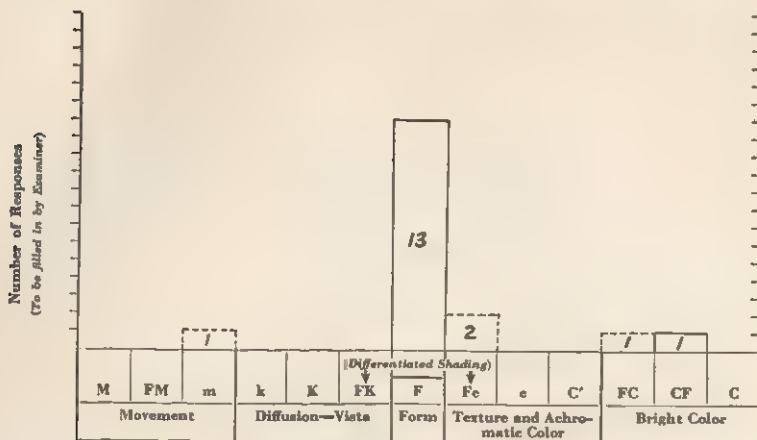
1. Just like crabs you'd see on a beach.
Add. That blue also reminds me of fossil matter that feeds on barrier reef. Matter you find in ocean.
2. The coloring here is like that in an orchid. The yellow, like in a species of flower.
Add. The green down below gets me. Could be a worm but I've never seen worms like that. Usually they're straight across. This part up here doesn't bring anything to mind (upper gray).

SCORING LIST *Form Level*

Card No. and Number of Response	Time and Position	Location		Determinant		Content		P-O		Word No. and Number of Response	Time and Position	Location		Determinant		Content		P-O	
		Main	Add	Main	Add	Main	Add	Main	Add			Main	Add	Main	Add	Main	Add	Main	Add
I		Wx		F		A		P		1.0									
			Wx		F	At				0.5									
II		Wx		F		Aobj				0.5									
			Wx		F	Geo				0.5									
III		Wx	S	F		At				0.5									
		Wx		F		Ad				1.0									
IV		W	S	F	→Fc	Aobj				0.5									
V		W		F		A		P	O-	1.0									
VI		W		F	→Fc	Aobj				0.5									
VII		W		F		Aobj				0.5									
		W	S	F		Geo				0.5									
VIII		D		F, FM		A		→P		1.0									
		D		F		Aobj				0.5									
			W		F	Emb				1.0									
IX		W		F	→FC	PL				1.0									
X		D		F		A		P		1.0									
		D		CF		PL				0.5									
			→D		→F		→A			0.5									
			→D		→F		→A	→P		1.0									

[2]

CASE 2 Scoring List



RELATIONSHIPS AMONG FACTORS

Total Responses (R) = 14 (+4)

Total Time (T) =

Average time per response ($\frac{T}{R}$) =

Average reaction time for Cards I, IV, V, VI, VII =

Average reaction time for Cards II, III, VIII, IX, X =

 $\frac{\text{Total F}}{R} = F\%$ $\frac{FK + F + Fc}{R} = \%$ $\frac{A + Ad}{R} = A\%$

Number of P =

Number of O =

 $(H + A) : (Hd + Ad) =$ $\text{sum C} = \frac{FC + 2 CF + 3 C}{2} =$

M: sum C =

 $(FM + m) : (Fo + o + C') =$

No. of responses to Cards VIII, IX, X = %

W: M =

Succession:

Rigid Orderly Loose Confused

(Place a check mark at the appropriate point on the scale above)

Estimate of Intellectual Level

Intellectual Capacity

... Very Superior
 ... Superior
 ... High Average
 ... Low Average
 ... Dull Normal
 Feeble-minded

Intellectual Efficiency

... Very Superior
 ... Superior
 ... High Average
 ... Low Average
 ... Dull Normal
 Feeble-minded

Note that this estimate is based mainly on the following:

number and quality of W
 number and quality of M
 level of form accuracy
 number and quality of O
 variety of content

Manner of Approach

W(71%) D(29%) d(—%) Dd and or S(—%)

Enter the location percentages in the spaces above. Compare these percentages with the norms shown in the box below, by placing a check mark opposite the appropriate range of percentages.

W	D	d	Dd and S
< 10% ((W))	< 30% ((D))		
10-20 (W)	30-45 (D)	< 5% (d)	< 10% Dd S
20-30 W	45-55 D	5-15 d	10-15 Dd S
30-45 W	55-65 D	15-25 d	15-20 Dd S
45-60 W	65-80 D	25-35 d	20-25 Dd S
> 60 W	> 80 D	35-45 d	> 25 Dd S
		> 45 d	

[4]

CASE 2 Summary of Quantitative Relationships

Sequence Analysis

At first glance, the record looks more like the case history than the superior performance on his intelligence test. The only reverberation of his performance in the much more structured situation of the intelligence test is his "highbrow" language, which forms a strong contrast to the banal content and the general emotional and intellectual poverty of the record. In the intelligence test performance, there was only one sub-test in which he remained slightly below the average, the digit symbol test, which he worked in his slow fashion, achieving a weighted score of nine. In several of the verbal sub-tests he came close to hitting the ceiling. Often he was dissatisfied in merely giving the correct answer; he had to add appropriate qualifications to demonstrate how well he knew the material. Similarly, in Card I, after seeing "a bat, the outline, anyway," he has to explain in the inquiry "It's the outline of it. Well, actually, you got the tail on the bottom . . ."

In Card II he gives so vague a response as, "Hm, could be, well, part of the body," even though he is inclined to take back this response later on. He gives an elaborate explanation: "It's been so long since I've seen the outline of a stomach. You wouldn't call it a rich outline. The color throws me off. I've taken art in school, and I've always had trouble."

This last remark adds an important new clue. The language and the reasoning might have looked schizophrenic due to the over-ideational and somewhat meandering characteristics, but the final statement certainly indicates that his affect is not ego-dissociated or flat. He continues his struggle with the color in the very next response, where he says, "If you black out the coloring, it would look very much . . ." Again, in the inquiry to the first response in Card III, "The coloring I don't recognize at all." When he comes to Card VIII, he says, explaining the usual animals, "These colors are starting to throw me out again." Again, in the second response and even in the additional response (where he sees a coat of arms), he uses "just the outline." Finally, in Card IX, the color catches up with him; he sees the insides of an orchid or tulip: "The color changes in

the insides." He adds a personal reference, then concludes, "It was a poisonous flower." In Card X he sees more flowers in the yellow. Additionally, he picks up the worms in the center green, but does not care for them very much: "Usually, they're straight across."

In testing the limits, he likes Card IX best, and gives the following explanation: "As I said before I appreciate beauty when I see it. I was chauffeuring and driving a cab and you have no idea how people can't appreciate the landscape. I know beauty when I see it and I appreciate the beauty of nature." At the same time, he feels the strongest dislike for Cards II and III: "There are two of them . . . Two (i.e. Card II), that has no appeal to me at all. Three, it's incomplete and the coloring blotches have no bearing on it whatsoever."

The reaction to shading shows considerably less struggle. There is considerable reluctance to verbalize his response to shading, and he insists, in the analogy phase of the inquiry, that it was not only the form that made him think of animal skins. His concern with animal skins goes beyond the usual cards, IV and VI, and includes the blot parts of II, V, and VII, as well as the center detail of VIII, which is stripped of color for that purpose.

The combination of color and shading reactions emphasizes his overpowering need for a submissive dependency. His terrific fear of strong emotional ties and his total preoccupation with the avoidance of any assertive commitment for the sake of a passive manipulation of his environment are likewise strongly indicated.

There is a strange contrast between his intellectual performance in the Rorschach and his superior performance on the Wechsler-Bellevue. Furthermore, this contrast penetrates into the Rorschach itself in his vocabulary, on the one hand, and the extremely limited form level on the other hand. Half of his responses remain on the level of 1.0, the other half on the level of .5. The content of his responses is highly stereotyped and evasive throughout. All this adds up to the picture of his intellectual abilities and capacities being employed to ward off life, rather than to live it. The only points at which his thinking becomes definitely loose or even weird are those wherein he is confronted with the physical aspects of sexuality. The mention of

testicles among the bones which he sees in the first response to Card III is the first clue, but his weird effort to explain (in the inquiry to Card VI) why the beaver skin is more male than female is the real giveaway. The confirmation comes in testing the limits, where he simply refuses to accept the similarity of any of the usual vaginal areas. When confronted with the upper detail in Card VI, he will confess only "Possibly, but not probably, a similarity" to the male sex organ.

It becomes understandable now how this man, through his adjustment on a very limited level of functioning and extremely skillful use of his passive mastery function, managed to avoid any overt psychotic breakdown. The ego-connectedness of his affectivity, operating carefully on an oral-dependent level, makes his classification in terms of nosological categories especially difficult. The deliberation of all his actions and reactions arouses the suspicion that his oral dependency may be a reaction formation against anal impulses, rather than a simple arrested development or regression. This may also be indicated by his association to the poisonous flower, when he is first forced to submit to the impact of color on Card IX, and the "feeding fossils" in Card X. He is probably best described as a schizophrenic character, with an affective, psychoneurotic overlay.

Case 3

In the preceding case situation, the Rorschach record of the patient was so meager and abbreviated that the interpretative process could start immediately with the sequence analysis. However, it would be most unwise to habitually omit the analysis of the "psychogram," the tabulation of the scoring categories. Some intuitive Rorschach interpreters indulge in self-deception by proclaiming that they are not using any scoring or tabulation of scores in their interpretations; actually, the interpretative processes based on scoring and tabulation have simply become automatic to the extent that the interpreters are no longer aware of them.

The following case history serves to illustrate the interpretative

importance of inferences derived from the contrast between the relationships of scores and the superficial impressions gleaned from the responses.

Report of Psychiatrist

Patient is a 32-year-old, divorced, white, Methodist, male veteran of World War II, non-service connected for NP disorder. He was admitted to the hospital in September, 1953, at which time he complained of severe headaches and multiple somatic complaints which had become increasingly severe since November, 1948. He was pre-occupied with suicidal ideas and was admitted as an emergency. On the patient's initial history no information leading to the diagnosis of schizophrenia was obtained. His admission diagnosis was "depressive reaction, chronic, severe, with acute suicidal trends." Within a few days after his admission his depression lifted completely. He was taken into individual psychotherapy and was discharged as improved in November, 1953.

The patient states that he was in good health until November, 1948. One day as he was driving a car he noted a snapping sensation in his head and neck. Since that time he has had frequent headaches and multiple somatic complaints. He states that something "jerked loose in my neck and threw the muscles off balance." His somatic complaints are very variable. They are increased with tension, excitement, and depression. He has frequent periods of mild depression, usually associated with family problems.

The patient's background story is marked by his profession of extreme hostility to his father, whom he describes as punitive, penurious, hateful, and inconsiderate, even going so far as to reiterate many times his feeling that his father was a psychopath without regard for the feelings of anyone, without moral obligation, and deceitful. His father, age 61, has had some success in the business of real estate and now owns several motels. In contrast, his mother, age 57, is described as a patient, submissive person who has been a source of much solace to the patient and has helped iron out much of the discord between the father and his son. He does mention that his mother has faults, however, and that she tends to withdraw from life "as I do." His

mother had a nervous breakdown and was hospitalized for two months, when the patient was approximately eight years old, due to her unhappiness with her husband. He has one sister, eighteen months younger, who is harsh and much like the father. She has never been close to the patient. The mother, however, describes the daughter as being very personable and outgoing and she has been distressed by the patient's aloof attitude toward his sister. During his growth the patient recalls many incidents of unhappiness due to his "heartless father."

He joined the air force in 1942, became a bombardier, flew twenty missions, and was discharged honorably without any service-connected disability. He claims he felt nervous and had occasional headaches in the service, but was never depressed. After leaving the service he worked for a short time for his father in his motels and then went to the state university of his home state where he graduated in 1949 with a B.A. degree in business administration. He was in the top five of his class in college (he had graduated first in his class in high school). He worked as an accountant until June of 1953, gradually becoming more depressed, having more and more somatic complaints, and finally terminating his work because of his severe physical disability. "headaches," increased by reading. He has a half interest in one of his father's motels.

Approximately one year ago, after an exceptionally intense, disturbing argument with his father while the patient was preparing his father's tax returns, the patient became extremely upset and agitated. When he left his father's home he was extremely anxious and apprehensive; on driving back to his own home approximately one hundred miles away he had a sudden lapse of attention and then recalls smashing into the rear of a truck. He was taken back to the city and hospitalized for approximately twelve days.

The foregoing information was given during the first few interviews with the therapist, but it was not until approximately the tenth interview that the patient told the therapist that he thought his father had meant to kill him. He stated that he feels that his father probably put poison into the coffee which he gave him before leaving his home and that he was drugged when he hit the truck.

While in the hospital his father visited him and told him not to say a word to the police about what had happened. This confirmed the patient's suspicions that his father had deliberately tried to kill him and he was afraid that his father would make a further attempt upon his life. When his father finally offered to drive him home after being released from the hospital, he was extremely fearful that his father again meant to kill him. This fear of his father's wish to kill him has persisted until the present day despite attempts to help the patient understand its delusional nature. The patient does state that when he is more depressed and his headaches more severe, his fear of his father increases correspondingly. Likewise, when he feels better the fear is less. During the past year, on the several occasions when he has seen his father, the patient has been extremely fearful that his father will poison him and he has purposely avoided his father because of this fear. While in the hospital after his acute depression lifted many odd somatic complaints were elicited, including the following: At times he feels like crying but does not. He feels that electricity is running down his head or that it is running from the middle of his back, up over his head into the roof of his mouth. He feels that his brain cage shifts back and forth at times, that his vertebrae are slipping, that the muscles in his neck are pulling against each other and at times when he lies down his muscles seem to pull him into his bed. At other times he feels as if his muscles are expanding. During the past three or four years he has gone to psychiatrists for short periods of time, leaving each before any real therapy could be started.

The patient has worn corneal lenses since 1947 due to extremely poor vision in one eye. At the time of admission he was unable to read even for a few seconds because of the exacerbation of his headache.

He was married in 1946 after a six-month courtship. The marriage lasted one year. His wife drank, apparently to excess, and he accused her of extra-marital affairs. He finally divorced her in September, 1947. Although he was nervous while married, he claims he felt no depression or somatic symptoms. Since his divorce he has gone out with only four or five other girls, one of whom he saw off and on for

a period of one year. The others he dated only two or three times each. He states that he has little interest in girls because his headache is too severe and that most women are a degrading influence and the source of 90% of men's troubles. He stated, "women are inclined to take what they can get out of men. I do not regret leaving women alone." He denies having had any homosexual experiences or desires.

The patient has been extremely interested in hypnosis and auto-suggestion and has accumulated a fairly large library of books on these subjects. He feels that his problems are mainly due to improper conditioning and that through auto-hypnosis (he requested to be hypnotized by a therapist many times during his stay in the hospital) hopes to obtain a cure.

Patient is a well-developed, tall, good looking, affable, superficially friendly man appearing about his stated age. He is always neat, well groomed and immaculate in his appearance. After the first few days following admission he gave no evidence at all of any dejection or depression. He is obviously of a superior intelligence, speaks well and fluently, and has been consistently relevant, coherent, and oriented. At times he is almost obsequious in his behavior to the therapist, thanking him for what he does, opening doors for him, and so on. He has been extremely polite to all ward personnel, but rarely associates with any patients, preferring to sit alone and read or at times go to hydrotherapy. He particularly enjoys the whirlpool, feeling this relaxes him a great deal. He spends a great deal of time working on muscle control through auto-suggestion and in interviews with his therapist he is interested in learning about anatomy, neural pathways, how the muscles are controlled, etc. He has given no evidence of hallucinations or other psychotic ideation except for the delusion and hypochondriacal symptoms noted above. In general, his mood has been affective and appropriate except when speaking of his delusion, when a fairly characteristic paranoid, suspicious, apprehensive look appears on his face. He has been persistently concerned with his inability to read and as therapy has progressed he has taken definite delight in gradually lengthening his period of concentration and reading without experiencing headaches.

At the time of discharge his hypochondriacal symptoms had lessened considerably, and with their lessening there was a diminution in the fear of his father. Although he was unable to accept the unrealistic, illogical meaning of his delusion, he was able to minimize it by forming some sort of direct relationship between his delusion and his symptoms; thus with improvement of the symptoms the intensity of his delusion decreased. He left the hospital considerably improved and in a cheerful frame of mind, realizing that he must stay away from his father (he arranged to live with relatives in another town). He stated that he would get in touch with a psychiatrist on his own and continue therapy if he felt this was needed.

Rorschach Record, Case 3

The test was administered to help in diagnostic clarification. A consultation was requested because the staff psychologists were puzzled by the seeming lack of psychotic clues in the Rorschach record in contrast to the observable clinical behavior.

CARD I

PERFORMANCE

9"

1. ^ First impression might be a bat or some sort of animal like that.

2. ^ Or could be a woman behind a screen.

3. ^ Could be some sort of a hooded person.

INQUIRY

1. (Show) Just the general impression, wings out here, head mechanism, and body. Have to use my imagination. (How see?) Hanging on the wall or ceiling.

2. General outline here, calves, hips, and head I can't see. (Screens?) Because I can't see it clear, it is hazy. This smoky screen projects from each side, and there is a variation in color.

3. Might say this is the hands and if you assume this is the body form, then this would be the hood or cape over the head, can't see a definite outline here. (This?) No, primarily the center portion.

4. ^ One of those topographical maps you see, some sort of an island.

1' 41"

4. The variations in color would indicate elevations and they do look sort of vague. I was in the air corps and studied them.

Add. Don't know if I mentioned it, but these look like some sort of a person here with a cloak on. This would be the head portion up here and the feet here.

CARD II

PERFORMANCE

5"

1. ^ In a very vague sort of way, might be a couple Russian dancers, big plumed hats.

2. ^ Or a couple dancing bears.

3. ^ If you look closer might see a couple witches in a symbolic dance, a couple little projections here.

1' 27"

INQUIRY

1. (Parts?) This would be the head, body, and the reason I said Russian is the bright red plumes and the costumes they wear in the symbolic dances. This would be the hands here. (Else?) Some of the Slavic people wear a sort of heavy coat or robe, which you don't see in North America.

2. Again it was this heavy area, the dark, the bulk of the outline. (Dark?) Like a bear's fur. (Fur?) No, I wouldn't say it is, again you would have to interpolate a little.

3. Well, this long nose. Again, I saw the body as a whole, if you look at the projections as a whole you get sort of a weird looking character like you see in Walt Disney.

CARD III

PERFORMANCE

8"

1. ^ This looks like at the first impression, two men in some sort of pose, guess you would say men, they have trousers on, course you have to stretch your imagination a little.

INQUIRY

1. Head, arms, body outline, legs, feet. (Men?) Just have to assume this because of the end of the trousers, course women wear them as much as men now, but from the hazy picture, have to say they are men. Women wear crew cuts so can't tell by that. Can't tell really though.

PERFORMANCE (*continued*)

2. ^ These things out to the side look like might be parrots. Is it permissible to turn it around? (Anything)

2' 7"

CARD IV

PERFORMANCE

3"

1. ^ This looks like it might be petals of some kind of flower. 'Course, don't use black flowers.
2. ^ Could be a couple of boots.
3. ^ This center part could be an old cow skull you see out on the ranch.
4. ^ Upside down, might look like some kind of insect. I think I see these things because of my associations—things I have seen in biology books on my father's ranch.

2' 14"

CARD V

PERFORMANCE

5"

1. ^ Again, sort of a bat.

INQUIRY (*continued*)

2. Right here, parrot head, of course you have to look at it from your position to see it. (Remind?) Well, parrots are usually a bright color, I think of them as green, but I suppose there could be red ones.

INQUIRY

1. These out here and the whole works. (About blot?) I'd say some flowers have rather irregular edges, rose of course has very smooth petals. (Else?) Just the general shape was the only thing.
2. Here and here, sort of ragged looking boots, but can see the heel here. (Much?) Up to about here. (Ragged?) In here, no toe and the shape around here particularly.
3. (Remind?) This would be the eye sockets here and the general shape of it. Again only an approximation. Certainly wouldn't recognize it in a textbook as a cow skull.
4. Again these eyes and feelers made me think of it. (This?) Sort of mentally eliminated this part which I kept in mind as a boot or boot heel. (Else?) No.

INQUIRY

1. (Show?) Head, tail, wings. (How?) Behind it, because can't see anything here that would remind me of a face, I'm not familiar enough with bats. (Where might see such?) Hanging on a wall.

2. ^ Then too some sort of an island.
2. That is just the general area. (How see?) As a topographical map, looking down on it.
3. ^ Not much to it, could be an insect with feelers.
3. This again, these are the feelers, the tail area and the wings.
4. ^ And these things have a vague resemblance to a human leg or possibly animal leg.
4. This would be the calf here, just the shape of it.

1' 20"

CARD VI

PERFORMANCE

3"

1. ^ That looks like some kind of insect, feelers, butterfly wings.
2. ^ This down below might be a topographical map, like you see in the Air Corps, because of the shading. If looking for a topographical map, this might be a road or canal. Sort of an odd looking thing.

1' 21"

INQUIRY

1. Head area, feelers, sort of wing here. Some insects when going through changes have all sorts of odd looking shapes.
2. This area here, I think I pointed out the reasons before.

CARD VII

PERFORMANCE

10"

1. ^ This is very definitely . . . thing would be a map of an island group, the shading might be the forest area, this could be a dam or canal between these two.
2. ^ In a vague sort of way, these might be two faces looking toward each other.

INQUIRY

1. Again the shape and the shading, representing various areas. (Dam?) See sloping down here.
2. Here (Parts?) Here would be one and again, it's not a very clear face—(Much?) Just these parts here. (This?) Not unless some sort of plume sticking up.

PERFORMANCE (*continued*)

3. ^ This way might be two dancers with big plumes on their heads, the general shape of the body on each side.

1' 44"

CARD VIII

PERFORMANCE

10"

1. ^ This looks like a couple squirrels or some sort of forest animal.

2. ^ This might be a butterfly, the wings here.

3. ^ And this looks like flower petals down here.

4. ^ This looks in a vague sort of way like the vertebrae you see in anatomy books.

1' 55"

INQUIRY (*continued*)

3. (Parts?) The head area, down to the feet, the arms. (Plumes?) The soft shading color.

INQUIRY

1. (Remind?) Again the shape, legs, head area and the little tapered bodies some of them have. (How?) No way of knowing, if they were moving I assume these would be the leg areas and they would have to be in different positions from that.

2. Just this area in here. (Remind?) The bright color and usually a light shade of color—I suppose some of them are brilliant.

3. Right here, again the general shape and color.

Add. And this might be just a colored sponge because of the shading and color. (Shading?) Makes it look spongy.

4. (Remind?) You have these little areas that might be the ribs sticking out.

CARD IX

PERFORMANCE

9"

1. ^ This might be a map of islands, the different colors would show you the type of vegetation on it.

INQUIRY

1. I think I made that clear.

2. ^ In a way these two could be a couple of witches, pointed caps you see in kids' books, back in kindergarten there.

1' 28"

CARD X

PERFORMANCE

18"

1. ^ This looks like a whole collection of bugs, etc., like *Life* magazine printed.
2. ^ This looks like sort of a rabbit here with the ears except these projections don't correspond.
3. ^ The center part looks like an island group.
4. ^ Those two blue items could look like those complicated tea pots with the design and projections.
5. ^ This looks like a couple little bugs chewing on a tree or bush, this would be the stem.
6. ^ These things here, on first impression remind me of frogs and again . . .
7. ^ Those little projections could be the legs of a horse or something like that.

3' 50"

INQUIRY

1. (Remind?) Only primarily the top area here, just the general impression of colors.
2. Just this here, would have to forget these things hanging down here.
3. This here. (Remind?) The irregular shape and the gradation in shading—this would be the wooded areas or something. Again, a topographical map.
4. (Gave impression?) I've seen those oriental things with the pipes sticking out, crazy shapes. (Color?) No, I've seen them in copper and brass too.
5. Nothing more than what I said.
6. (Remind?) I think the round body outline, don't see too much resemblance. Think it might be the color. A frog has a sort of olive green color.
7. I'll tell you what reminded me of that was Mobilgas symbol. The flying horse, the legs reminded me of that. (Only legs?) Mostly.

SCORING LIST

Card No. and Number of Response	Time and Position	Location		Determinant		Content		P-O		Card No. and Number of Response	Time and Position	Location		Determinant		Content		P-O	
		Main	Add	Main	Add	Main	Add	Main	Add			Main	Add	Main	Add	Main	Add	Main	Add
I	9/101									VIII	10/115								
1	Λ	W		F	→FM	A		P		1	Λ	D		F		A		P	
2	Λ	D		M	Fc	H				2	Λ	D		FC		A			
3	Λ	D		M		H				3	Λ	D		FC		PL			
4	Λ	W		kF		Geo				4	Λ		D		CF, F	Obj			
	Λ		D		M		H				Λ	D		F		At			
II	5/87									IX	9/88								
1	Λ	W		M	FC	H				1	Λ	W		F/C		Geo			
2	Λ	W		FM		A		P		2	Λ	D		(M)		(H)			
3	Λ	W		(M)		(H)													
III	8/127									X	18/230								
1	Λ	W		M		H		P		1	Λ	dr		CF		A			
2	V	D		FC		A				2	Λ	D		F		Ad		P	
										3	Λ	D		kF		Geo			
										4	Λ	D		F		Obj			
										5	Λ	D		FM		A			
										6	Λ	D		FC		A			
										7	Λ	D		F		(A)			
IV	3/134																		
1	Λ	W		F		Pl													
2	Λ	D		F		Obj													
3	Λ	D		F		Obj													
4	V	D		F		A													
V	5/80																		
1	Λ	W		F	→FM	A		P											
2	Λ	W		kF		Geo													
3	V	W		F		A													
4	Λ	D		F		Hd													
VI	3/81																		
1	Λ	D		F		A													
2	Λ	D		kF		Geo													
VII	10/104																		
1	Λ	W		kF	→FK	Geo													
2	Λ	D		M		H													
3	V	W		M	Fc	H													

[2]

CASE 3 Scoring List

TABULATION SHEET

LOCATION

DETERMINANTS

CONTENT

POPULARITY-ORIGINALITY

Number of Card

Scoring Symbols

	I		II		III		IV		V		VI		VII		VIII		IX		X		Total	
	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add	Main	Add

W	w	II		II		I		I		III				II				I					13	
D	DW																						21	2
d																								
Dd	dd																							
	dc																							
	di																							
	dr																							
S																								
Main Total		4	+	3	+	2	+	4	+	4	+	2	+	3	+	4	+	2	+	7	+	-	35	

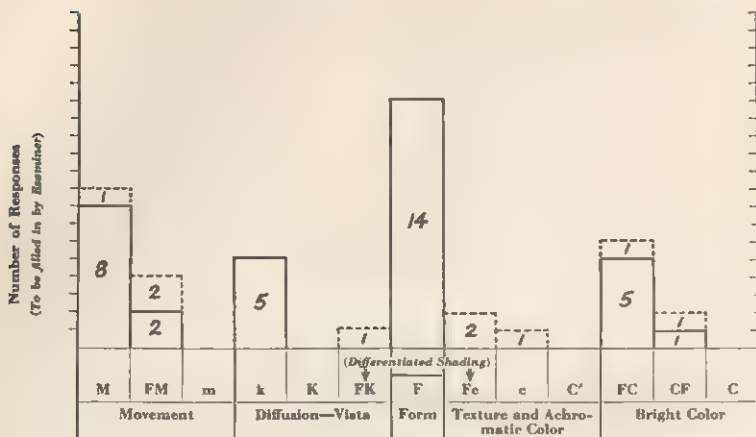
M		II	I	II		I							II				I						8	1
FM			I	I						I										I			2	2
Mm,mf,Fn																								
k(A,F,Fs)										I		I		I						I			5	
K(K,KF)																								
FK																	I							1
F	F+							III		III		I					II					III		14
	F-																							
Fc				I													I							2
c(cF,c)																			I					1
C(cF,cF,c)																								
FC	FC					I	I										II			I			5	1
	FC-																							
CF	CF																I			I			1	1
	CF-																							
C	C																							
	Ca																							
	Colra																							
	Cays																							
Main Total		4	+	3	+	2	+	4	+	4	+	2	+	3	+	4	+	2	+	7	+	-	35	

H		I	I	II		I							II				I						8	1
Ha						I																		
A		I		I		I											II					III		13
Ad																						I		1
Anhy																								
At																	I							1
Sex																								
Ob								II									I			I			3	1
Pl								I											I				2	
N																								
Geo		I								I		I		I					I		I		6	
Art and Des																								
Arch																								
Em-ten																								
Clouds																								
Wood																								
Fur																								
Mask																								
Abstract																								
Main Total		4	+	3	+	2	+	4	+	4	+	2	+	3	+	4	+	2	+	7	+	-	35	

P		I		I		I											I			I			6	
O																								

[3]

CASE 3 Tabulation Sheet



RELATIONSHIPS AMONG FACTORS

Total Responses (R) = 35

Total Time (T) = 1147"

Average time per response ($\frac{T}{R}$) = 33"

Average reaction time for Cards I, IV, V, VI, VII = 6"

Average reaction time for Cards II, III, VIII, IX, X = 10"

Total F = 40 F%

 $\frac{FK + F + Fc}{R} = 40\%$ $\frac{A + Ad}{R} = 40\%$

Number of P = 6

Number of Q =

(H + A) : (Hd + Ad) = 21 : 2

sum C = $\frac{FC + 2CF + 3C}{2} = 3.5$

M : sum C = 8 : 3.5

(FM + m) : (Fc + c + C') = 2 : 0

No. of responses to Cards VIII, IX, X = 37%

W : M, = 13 : 8

Succession:

Rigid Orderly Loose Confused

(Place a check mark at the appropriate point on the scale above)

Estimate of Intellectual Level

Intellectual Capacity

Very Superior

Superior

High Average

Low Average

Dull Normal

Feeble-minded

Intellectual Efficiency

Very Superior

Superior

High Average

Low Average

Dull Normal

Feeble-minded

Note that this estimate is based mainly on the following:

number and quality of W

number and quality of M

level of form accuracy

number and quality of O

variety of content

succession

Manner of Approach

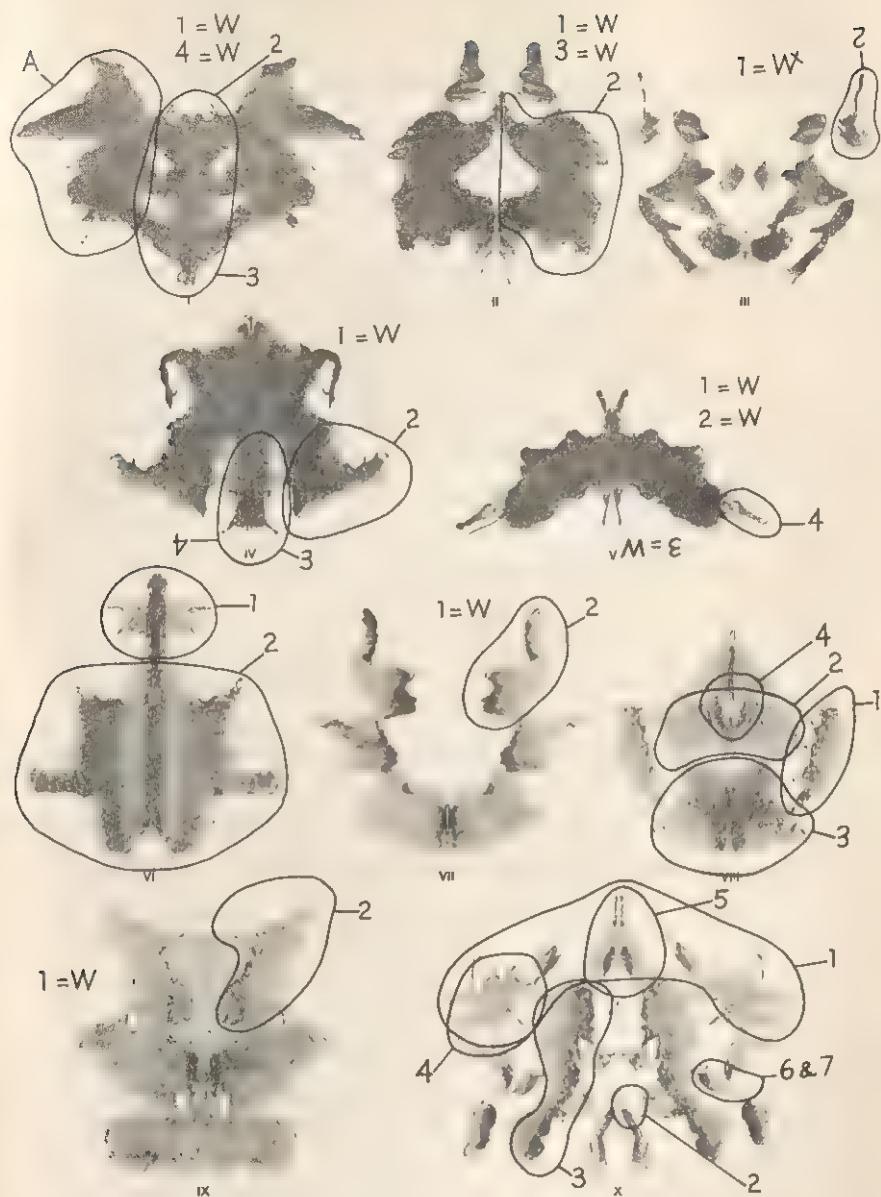
W (37%) D (60%) d () Dd and S (3%)

Enter the location percentages in the spaces above. Compare these percentages with the norms shown in the box below, by placing a check mark opposite the appropriate range of percentages.

W	D	(d)	Dd and S
< 10% ((W))	< 30% ((D))		
10-20 (W)	30-45 (D)	< 5% (d)	< 10% Dd S
20-30 W	45-55 D	5-15 d	10-15 Dd S
30-45 W	55-65 D	15-25 d	15-20 Dd S
45-60 W	65-80 D	25-35 d	20-25 Dd S
> 60 W	> 80 D	35-45 d	> 25 Dd S
		> 45 d	> 25 Dd S

[4]

CASE 3 Summary of Quantitative Relationships



CASE 3 Location Chart

Quantitative Interpretation

For demonstration purposes, the following interpretative analysis of the tabulation of scores was completed before the case history was presented.

A glance at the distribution of determinants reveals a number of sharp contrasts. On the one hand we see an excess of *M* over *FM* (see Volume I, pages 289 ff.), and an excess of *FC* over (*CF* + *C*). On the other hand we are confronted with the preponderance of chromatic color over achromatic color and surface shading ($7\frac{1}{2}$ to $11\frac{1}{2}$), and a preponderance of undifferentiated shading over differentiated shading ($5\frac{1}{2}$ to $1\frac{1}{2}$).

This picture is intensified by the inadequacy of the differentiated shading when compared to pure form (with 14 *F* responses, the optimal range for shock-absorbing aspects of shading should be between $3\frac{1}{2}$ and $10\frac{1}{2}$).

What could this pattern indicate? The relative emphasis on *M* and *FC* by itself would point to an overemphasis on ideation and control at the expense of awareness of drive impulses and spontaneity of behavior. If this pattern were combined with an extensive use of shock-absorbing mechanisms (expressed in the differentiated use of shading) and with an excess of anticipation over direct emotional response (expressed in the relative emphasis of achromatic determinants over bright color) then we would have a well-established picture of a somewhat obsessive-compulsive character which would not necessarily counteract a constructive social adjustment.

However, when the pattern is combined with a scarcity of shock-absorbing mechanisms and an inability to anticipate emotional contingencies, the only possible implication is one of decompensating character defenses. Augmenting this with the excessive indications of free-floating anxiety, non-contained, we cannot exclude the possibility of a panic reaction, which may express itself even in psychotic or near-psychotic behavior.

The next striking feature of this psychogram is an excess of *k*, with corresponding absence of *m*, suggesting the presence of a great deal of feebly intellectualized anxiety. This would seem to indicate two

facets of an ongoing process: little awareness of psychological tension or conflict, and an ego passively overwhelmed by anxiety—that is, instead of fighting actively for equilibrium, the ego is the victim of anxiety. This low frustration tolerance for psychological conflict discloses a weak spot in the ego organization which penetrates beyond the anal to the oral level, and anticipates the breakdown of the “character armor.”

The marked insufficiency of surface shading responses indicates friction in interpersonal relationships; in spite of the patient's passive-submissive attitudes, he lacks sensitivity to the feelings of others. Why are there so few surface shading responses? Is it because dependency feelings and needs are unacceptable to this subject, or because the subject was greatly deprived in the gratification of oral needs in his infantile period of development, or are there elements of both present? While answers to these questions must be found in the sequence analysis, the presence of one *CF* seems to give a hint in which direction the answer lies. The presence of this undifferentiated, infantile craving for oral gratification, concomitantly with the relative intellectual maturity reflected in the rest of the psychogram, points to an anachronistic survival from the early ontogenetic development and a severe oral frustration in early childhood. Thus, we should find oral-sadistic revenge feelings and distrust of people, and since this combination of late oral and anal fixation is found to be the nuclear constellation in paranoia, we may also expect suspicious character attitudes.

Qualitative Interpretation

Turning our attention to the raw material of the responses themselves, the conclusions drawn from the distribution of determinants seem at first almost unbelievable. A superficial reading of the record might leave even an experienced Rorschach worker with the impression of a fairly normal subject. Only a closer look reveals the clues that confirm the suspicions aroused by the distribution of determinants.

An analysis of the thought processes, as expressed in the Rorschach record, produces a much more favorable picture. There is some

overemphasis on the use of *W*'s which would not be unfavorable in itself if the form level of these whole responses were at least in line with the rest of the responses. However, a closer inspection shows that out of 13 whole responses, 5 are indefinite or semi-definite in their form structure (mostly maps), and two more (bat in I, 1; insect in V, 3) are definitely less specified than the rest of the responses. In contrast to this situation within the whole responses, only two of the 22 usual large details are such semi-definite geographical responses; and every one of the remaining 20 *D*'s exceed the minimum form level by having at least two or three constructive specifications, except on IV, 4, and V, 4. The latter also includes the only personal references, which marks it definitely as a complex response since he cannot decide whether the leg (side *d*) is human or animal.

Since the form level as a whole clearly indicates a person of superior intelligence, possibly even with some creative potential, the unfavorable form level of the *W*'s reinforces the indications of danger of an overideational development, accompanying the decompensation of obsessive-compulsive character defenses.

On the other hand, the absence of any clear perceptual distortions, either in a total response or in any specifications, gives the impression that we deal with a person who would show only the faintest cracks in his reality testing.

If we proceed from the perceptual to the conceptual thought processes, such cracks become more visible. The formulation in IV, 1, gives a paralogical impression. He was not forced to see flower petals, and if he wanted to, he certainly had the intelligence to think of photo reproductions of flower petals. Instead, he withdrew the responses half-heartedly with a reasoning that is, at best, extraneous or even tangential. In the inquiry he comes back to the response, but his reasoning does not improve. The reference to the roses certainly indicates the loosening of the thought processes in the direction of free association.

It is not difficult to demonstrate that this first crack in his thought processes does not occur accidentally in Card IV. He recovers temporarily in the second and third responses by giving two fairly ordinary and well specified responses. But the last response to this card,

which supposedly constellates the aggressive masculine aspects of the father image, shows again a drop in form level, accompanied by a direct reference to "my father's ranch." The inquiry reinforces the interpretative picture with a far-fetched and, in contrast to his other verbalizations, rather stilted remark.

At this point, it is interesting to consider that the only clear-cut delusion he ever produced was the assumption that his father had tried to poison him.

Sequence Analysis

The most damaging feature produced by the sequence analysis is the conspicuous absence of any subjectively-felt discomfort in dealing with the color stimuli. When the red color first appears in Card II, it is unhesitatingly (5" reaction time) and spontaneously incorporated into a good response. In the next card, after the usual response to the black area, he picks up the outer red spots and again has no difficulty in combining form and color. When he comes to the pastel shades of Card VIII, he first gives the usual animal response and immediately proceeds to combine form and color without hesitation or discomfort in the next two responses. In the inquiry he adds a *CF* response which he combines with undifferentiated surface shading. In Card IX he has to go out of his way to use the color in some arbitrary fashion, but he does not seem disturbed about it. The same procedure occurs in the beginning of Card X, where the combination of form and color seems even more far-fetched than in Card IX. But, again, the subject shows no sign of felt discomfort and proceeds with a number of rather obvious detail responses. Then, in X, 6, he tries to include color again, and follows this with the use of the same area, disregarding color. The total treatment of color does not convey deeply-felt, strong emotions, but it completely lacks the indications of discomfort that usually accompany the mobilization of ego-defenses. This in itself tends to confirm the impression of the affect picture gained from the analysis of the psychogram.

This is augmented by the fact that the subject feels much more uncomfortable about shading than about color. From Card I on through the series, he is preoccupied with shading. In the inquiry to

the second response he expresses his discomfort: "I can't see it clear. it's hazy, the screen projects from both sides. It's the variation of color." The last response to this card produces his first map concept. He changes his attitude in Card II, and after calling the bears dark and speaking about their fur, he denies shading: "you would have to interpolate a little." As described previously, Card IV, the first more strongly shaded card, is by far the most disturbing to him; but he does not mention shading a single time, despite the fact that he has used this determinant freely before. In Card V, where shading is not obtrusive to most people, he brings in another topographical map. Finally, in Card VI, he shifts his position again. He disregards shading for the butterfly wings in the top area with a strange reasoning on the borderline of logic: "some insects, when going through changes, have all kinds of odd-looking shapes." When he comes to the bottom area, he spontaneously uses the word "shading" in the performance proper, but remains in the safe position of an Air Corps bombardier for this dangerous area. His discomfort is expressed in the final phrase, "what sort of an odd-looking thing." He continues in the same vein in Card VII. Characteristically, he cannot decide whether the area usually seen as the vaginal folds is a dam or a canal, just as he finally cannot decide whether the figures in Card III are men or women. On the other hand, it is remarkable how well he recovers in the two consecutive responses. The third response contains one of the few occasions where he can use shading as a differentiated surface characteristic.

Even in the colored cards he comes back to the shading, but never as an *Fc* substitute for color. In the additional response to VIII, he uses the word "shading," but says merely that it looks "spongy." In the third response, he again transforms the large pink areas into topographical maps. In contrast to his dealing with color, his dealing with shading is characterized by an almost complete inability to approach it as a differentiated, constructively used surface element. He gets lost in the vagueness of his topographical maps (in spite of being a former bombardier, he does not seem to know the difference between an aerial and a topographical map). Most of the time he has to maintain distance. If he cannot handle shading in this manner, he

tries to disregard or deny shading. Only once does he speak of the "soft shading color" of the plumes in Card VII.

The dynamics of his responses to shading lack the affective shock-absorbing power of *Fc* and the consistency of an intellectualized defense, as represented by some occasional *k*'s. Instead, they show a desperate but ineffective groping for insight, which is part of the panic that brought him to the hospital. The marked contrast between the lack of color disturbance and the intensity of his shading disturbance indicates the depth of his emotional disorder. But the contrast also makes clear his ability to have returned so quickly to his pseudo-normal existence after two months in the hospital.

The relative security in the handling of color, together with the characteristic quality of his thought processes, represents the intactness of the outer shell of reality testing and social control of his behavior, while the shading dynamics reflect the instability and sponginess of his ego organization within this protecting shell.

Summary

These sample cases illustrate three routine ways in which the interpretative process can be incorporated into the clinical situation. In the first case, the information obtained from sources apart from projective techniques is particularly rich, and the main function of the interpretative process is to reassure the clinicians responsible for treatment planning in regard to the underlying personality organization. In the second case, the picture gained from sources other than projective techniques is highly confusing and impoverished, and the interpretative process actually adds new vistas to the whole personality picture. In the third case, the key point for the incorporation of projective techniques was the seeming contradiction between the clinically observable facts and the superficial impression gained from the test performance. The interpretative process served as a valuable aid in rendering the total picture more understandable.

Parallel to these variations in the clinical situation calling for the use of projective techniques, the technical emphasis in the first case was on the elucidation of the emotional adjustment potential

through the sequence analysis of color and shading dynamics. The second case called for a minute analysis of the patient's thought processes and their relation to his affective dynamics; while in the third case a full, detailed use of both quantitative and qualitative interpretations was needed to clarify the diagnostic picture.

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NOTE: The author wishes to express his thanks to Marvin H. Berenson, M.D., Henrietta Munroe, and Henry Munroe for providing case study material for this chapter. To give credit for specific items seems inadvisable because of the need for withholding clues to the identities of the subjects.

Methodological Research Problems

Classification and Scoring

One of the facts most frequently overlooked in the discussion of research problems comparing psychometric instruments with projective techniques is the semantic variation in the use of the word "scoring." Traditionally, the word "scoring" refers to some form of quantitative evaluation of the total or partial results of the use of psychometric instruments, based on the standardization of these instruments; for instance, a certain number of correct answers to any subtest of the Binet or the Wechsler-Bellevue tests yields a certain number of months of mental age or a certain weighted score, which contributes its share to the total mental age or total score achieved by the subject.

Such "scoring," in the sense of a quantitative evaluation of test results, has only a very limited place in the field of projective techniques. Specifically, in the Rorschach technique, there are only three areas of "scoring" that can be compared, at least in part, with such a procedure. They are the establishment of usual detail areas, the determination of the popularity or originality of a response, and the process of form-level rating. In all other instances, the "scores" used by various authors represent merely a process of classifying certain important qualitative aspects of the subject's responses in order to facilitate the computation of how often this particular type of response occurs in any one record, in different records, or in different groups of records.

Correspondingly, the only kind of "interpretative hypotheses" that could legitimately be attached to any such classification scores are such meanings as derive from the phenomenological characteristics of the classification that led to the scoring symbol.

To use a concrete example, the scoring symbol W or W merely indicates the fact that the subject was trying to use all the blot material on any given card, or as much of it as he could manipulate, for the formation of any given response. Consequently, the $W\%$ indicates the frequency with which such an attempt to use the whole blot material, or as much as possible, was made by any given subject. Obviously, any attempt to attach more meaning than that to a $W\%$ would be premature; for instance, the $W\%$ does *not* tell us which of the following conditions may have produced a high $W\%$:

1. A major cortical lesion may have reduced the intellectual flexibility of the subject to a point where it is difficult, or even impossible, for him to subdivide the total blot material into meaningful sub-wholes.
2. The subject might be an unusually gifted person with a rich imagination, who enjoys organizing and reorganizing the blot material on each card in such a way that all the materials on each card are used as meaningful components of a well-integrated concept.
3. The subject might be a person of mediocre intelligence who does not know the limits of his reasoning power. He overestimates his organizing capacity in a futile attempt to organize the blot material on each card into a whole concept. This results in semi-definite, or primitive, whole responses, involving just the bare outlines of the total area without any constructive specifications. An example of this would be "butterflies," "birds," or any other flying creatures.

In addition to these three conditions, quite a few others might result in a high W percentage. The low level of complexity of meaning which a score like $W\%$ represents, if used atomistically, does not permit a choice among such possible explanations.

This does not mean that the $W\%$, even as an atomistically used

score, has no value at all. On the contrary, it has proven to be quite useful—for instance, in distinguishing changes in the mental approach among different age groups and even among members of different cultural groups. But such significant differences in $W\%$, whenever they are found, are clearly starting points for further questions as to the personality organization producing such a $W\%$ and not satisfactory answers as such. This is true in all fields of application of the Rorschach technique, but it is especially true in the medical field. Here we are specifically interested in the conditions producing the high $W\%$.

What is, then, the procedure that would lead from the preliminary use of classificatory scores to the testing of clinically meaningful hypotheses? The example of $W\%$, used before, can illustrate the fact that the intrinsically appropriate procedure for reaching meaningful interpretative hypotheses is to raise the internal level of complexity of any classificatory score.

In order to explore why any subject, or group of subjects, may be inclined to produce a high $W\%$ in Rorschach records, we have to add to the classification of location something that throws further light on the conceptual procedure the subject uses to arrive at his concepts. The technique developed for this very purpose is a study of form-level characteristics. The striking differences among the three types of subjects listed above will appear immediately if we become aware of the way in which their W 's are constituted.

We might get additional information by combining the $W\%$ score—for instance, with the classification score M , indicating the tendency to see humans or human-like beings in human-like postures or actions. This would, in our illustrative example, easily distinguish the second type of subject from the first and third, while it would not distinguish the first and third from each other. With each combination of atomistically used scores, we also face the technical difficulties described in the next section. However, the cluster or pattern analysis might serve supplementary purposes for gaining the information we are seeking. The main method for obtaining such information is to discover clues with appropriate internal complexity.

Problems of Validity and Reliability

Validity of Signs

In her chapter "Problems of Validation" (Volume I, Chapter 14) Mary Ainsworth surveys the whole field of Rorschach validation problems. She also discusses the relationship of this general field to the clinical use of the technique, as follows:

From this point of view there is no sharp dividing line between validation research and the clinical use of the Rorschach technique; the process of development and modification of hypotheses through everyday clinical use, which has been going on since the Rorschach technique was originated, is in validation research greatly extended and supplemented by the use of systematic scientific controls and techniques. Nor is there any sharp dichotomy between validating Rorschach hypotheses about personality function and validating any other such hypotheses. Validation research cannot be separated entirely from more basic research into personality function and development. Improvements in methods of observation facilitate advances in the understanding of the functions observed; advances in the scientific understanding of the function facilitate refinements in the method of observing it and the interpretation of the significance of what is observed. In this context, validation of the Rorschach technique is a continuing process; indeed, the technique itself is continually changing through the validation process. [Page 406]

In the last section of the present chapter, we hope to crystallize the underlying philosophy of this attitude toward validation. At this point, following our discussion of classification and scoring, it seems worthwhile to add to Dr. Ainsworth's survey one more problem. This problem is that of the atomistic use of classificatory scores as "signs" for testing the validity of the Rorschach technique against nosological categories or similar classifications of clinically observable behavior.

One of the most obvious statistical reasons for the inappropriateness of the sign approach is the empirical fact that there are hardly any signs whatsoever that prove to be "pathognomic." Most signs

are so rarely specific for any clinical group of subjects that a comparison with any control group results in an overlap of the occurrence of these signs in both groups. This may provide a significant group trend, but such a sign proves worthless for individual diagnosis. We may try to improve this situation by using patterns of signs instead of individual signs. These sign patterns become more and more specific for our experimental group of clinical subjects, and reduce or eliminate the overlap of occurrence with any control group. However, we are left with the sad result that such a sign pattern applies only to an insignificant proportion of our experimental group, and for that reason it becomes useless as a tool for individual diagnosis.

The lack of validity of the sign approach has been clearly demonstrated in a recent, as yet unpublished dissertation [1]. The sign approach investigated in this dissertation is the widely discussed use of "color shock" signs. Quite a few otherwise well-qualified research workers have come to amazing conclusions. They assume that the lack of significant differences in the occurrence of color shock signs obtained from records based on the usual Rorschach cards, as compared with an achromatic version of the cards, proves that the color has nothing to do with the affective response of the subject. The phenomenological and clinical absurdity of such a conclusion should have been obvious to any experienced Rorschach worker. Dr. Crumpton has now clearly demonstrated that it is not the color stimulus that fails to differentiate between two such groups of records, but the use of the sign approach. In her material of 30 achromatic and 30 chromatic records (obtained from ten schizophrenic, organic, and neurotic subjects each) a most careful and generous use of the supposedly established color shock signs also failed to show statistically significant differences. A more appropriate use of the same material clearly demonstrated the influence of color. For this demonstration, Dr. Crumpton used the following procedure.

A number of judges, who were deliberately chosen from clinicians who had only a moderate experience with the Rorschach technique (second- and third-year Veterans Administration trainees), received the following set of instructions, including the questionnaire:

Instructions

Attached are Rorschach protocols assembled in pairs. Read the two records of each pair in the order in which they were given to you, and complete ratings for one pair before proceeding to the next. For each pair, compare the two protocols in terms of the questions listed on the sheet attached to the pair. Insert the subject number of the record of your choice in the blank after each question. For example, if 303 appears to be a "richer" record than 101, write "303" in the blank after question #1. On question #5, insert in the blank the number of the question which you choose. Answer every question. There is no "don't know" or "equal" category. Consider qualitative aspects of the records rather than number of responses or amount of verbalization. In making these judgments, use the criteria which you customarily use in comparing a particular record with another or in comparing it with your memory of all the records you have examined. This is essential to the study, since its purpose is to investigate what is actually used in making differential diagnoses, and, if used, how effective is this use.

Pair #_____

1. Which of these two records would you call the "richer" record in terms of what you could make of it for interpretative purposes? 1_____
2. Which of the two shows the greater reaction to "color"? 2_____
 - a. Which shows the greater reaction to "color" of the pleasantly stimulated type? 2a_____
 - b. Which shows the more disturbed reaction to "color"? 2b_____
3. Which shows the greater reaction to "shading"? 3_____
 - a. Which shows the greater reaction to "shading" of the pleasantly stimulated type? 3a_____
 - b. Which shows the more disturbed reaction to "shading"? 3b_____
4. Which shows the greater concern for "form"? 4_____
 - a. Which shows the greater concern with "form" of the accurate, highly specified type? 4a_____
 - b. Which shows the greater concern with discrepancies between the response-content and the "form" of the inkblot? 4b_____
5. Which of the above questions (2, 3 or 4) was easiest for you to answer? 5_____
6. Which record shows more neurotic disturbance? 6_____

7. Which record shows more psychotic disturbance? 7_____
8. Which record shows more disturbance which might be attributed to organic brain pathology? 8_____

The answer to question 2 ("Which of the two shows the greater reaction to 'color'?") showed a statistically significant difference in favor of the records based on the usual Rorschach cards. This was in spite of the fact that the investigator completely succeeded in veiling the purpose of the experiment for the judges. None of them, on actual questioning, had the slightest suspicion that some of the records were based on achromatic test cards. In other words, using the usual definition of color shock signs, one could find them just as easily and frequently in records produced from *achromatic* stimulus material as from chromatic stimulus material, while the same records revealed the influence of color when they were used in a clinically more appropriate fashion.

Reliability of Signs

The wide variety of problems in connection with reliability in the Rorschach test have been ably covered in Chapter 14 of Volume I (pages 441-461). All that we have to add here are some remarks following from our discussion of the sign approach.

Either a clue is so simple that it can be easily defined and its reliability is high and validity is low, or a clue catches some important quality of the material which would raise its validity but lower its reliability. The discovery of such meaningful clues usually presupposes a higher skill in the experimenter or judge who is charged with the responsibility of discovering such clues.

To counteract this difficulty, carefully prepared instructions with ample illustrative material taken from pilot studies can raise the inter-judge reliability and lower the demands for skill and experience in the judges to a manageable level.

Meaningful check lists containing genuinely pathognomic clues for various clinical entities are indispensable tools for clinical Rorschach research. These are not atomistic signs in the usual statistical

sense, since their reliability is tied to a high level of clinical experience.

Another aspect of reliability is connected with repeat performances with the same subject, rather than with inter-tester reliability. Rorschach reactions have to be sensitive and flexible enough to reflect even minor changes in moods and attitudes, especially in response to therapeutic efforts. Paradoxically, however, they also have to reflect the more stable aspects of the personality organization, which enable us to recognize different Rorschach records as stemming from the same individual. The signs mentioned in Rorschach literature are rarely well-enough defined and identified to enable the researcher to even guess whether he should or should not expect any reliable reappearance of the same sign in repeat testing.

Prediction and Relevance

We may define a symptom as a form of clinically observable behavior to which we assign meaning as an indicator of the existence of an assumed disease or personality disorder. This assigning, however, has to be clarified further. If we assume the existence of a specific disorder or of a specific aspect of personality organization, we may expect the occurrence of any number of forms of observable behavior, which only have in common the fact that they are all relevant to the existence of the assumed personality characteristic, or vice versa. The existence of some observable form of behavior may be relevant to a variety of forms of personality organization, all of which may produce this type of behavior under certain circumstances.

We may express this same fundamental aspect of the nature of symptoms in clinical terms. It is unfortunately true that quite often the same symptomatology is engendered by different disorders and personality constellations, while genotypically similar personality constellations show phenotypically different symptomatology.

The existence of a specific symptom would not permit us to assume the existence of one specific cause. Neither would a specific disorder permit us to expect the occurrence of one specific symptom. Therefore, there is no cause-and-effect relationship that would permit us

to use what Cronbach called "Validity of Prediction" [5]. Rather, we have to apply, to the relationship of sign and symptom, a second concept of validity, which is discussed in the above-mentioned reference. This is the "Construct Validity." [5, Chapter 15]

The Phenomenological Approach

The Concept of Phenomenology

The term "phenomenology" may evoke semantic scruples in many readers. The authors, too, had to overcome considerable hesitancy before committing themselves to its use.

The term was reintroduced into the vocabulary of American psychologists by Snygg and Combs in their book *Individual Behavior* [4]. It seems to us that much of the potential value of this term became lost due to the tendency of Snygg and Combs to emphasize that aspect of the phenomenological method having to do with introspective techniques of observation. Nevertheless, the revival of the discussion around the phenomenological method remains a valuable service that Snygg and Combs performed.

Within the framework of contemporary, post-World War II European psychology, the term phenomenology is closely linked to the existentialist movement. This presents the danger that the semantic confusion which inundates this movement may also engulf the concept of phenomenology.

In order to safeguard our use of the term from possible semantic contamination, it might be best to return to the original source of the concept in modern psychology and philosophy—namely, Edmund Husserl—and to apply his ideas directly to methods of psychological research as they have developed since his publication of *General Introduction to Pure Phenomenology* [2].*

* According to the advice the authors have received from two colleagues in the field of philosophy (Rudolf Carnap, UCLA, and Herbert Feigl, University of Minnesota) it seems doubtful whether the relationship between the psychological method of phenomenology and Husserl's method is close enough to warrant such a reference. However, the authors' own contact with some of Husserl's disciples, especially Moritz Geiger, gave them the impression that such a relationship not only exists, but has proven to be very fruitful.

The process of adapting Husserl's approach to psychological research unfolded first within the volumes of the *Jahrbuch für Philosophie und Phaenomenologische Forschung*. This development coincides, within the covers of these same volumes, with the application of Gestalt psychology to clinical problems.

The basic ideas of this adaptation might be formulated as follows:

The observable phenomena, both in the field of internal (introspective) and external observation, do not offer themselves in the form of an unstructured mass of unrelated items. Rather, they fall into a "natural" pattern * or configuration with specific foci and emphases.

The observer cannot avoid using a definite frame of reference in describing his observations. This frame of reference, however, may impinge on the natural pattern of the observed phenomena—even distort or destroy the pattern. On the other hand, it may leave this natural pattern undisturbed, or throw it into clearer relief.

The phenomenological approach, as understood here, focuses on this interplay between the observer's frame of reference and the natural pattern of the observed phenomena. The phenomenologist deliberately attempts to modify his frame of reference in order to achieve maximal clarity of the natural pattern in the observed phenomena.

The Clinical Use of Phenomenology

Within the clinical field, the object of our observation is the behavior of our patients. Before we make any attempt to interpret this behavior within any theoretical frame of reference, we have the indispensable phenomenological task of studying the natural pattern of their behavior with all its lights and shadows, its shifting emphases, and more stable foci.

The question arises, of course, whether such configurations or "natural" patterns exist objectively or are merely a projection of the

* These formulations were discussed in a seminar on "Methodology of the Behavioral Sciences" conducted by Abraham Kaplan at UCLA. Dr. Kaplan pointed out that it is to be understood that these "natural" patterns are not something outside of experience, like a *Ding an sich*, but part and parcel of the experience.

clinical observer. The "New Look" movement in the psychology of perception has enriched our knowledge of the role such projections play in perception. But it would be extremely naïve to assume that the discovery of this new field of projection obviates the assumption of any objective subject matter in the field of perception. For example, the fact that the economic status of an observer influences the phenomenal size of a coin in a visual field that abolishes the usual clues for size-constancy does not simultaneously abolish the fact that all observers with intact reality testing see a coin of some size.

Correspondingly, we can assume that there are also "coins" in our observations of the clinical behavior of patients. These "coins" of our clinical observations may first be mildly distorted by the unconscious projections of our own need system. However, these mild distortions are harmless as compared with the crippling effect our theoretical biases may have unless we protect the natural pattern of our clinical observations by a careful phenomenological perusal before trying to understand them theoretically.

These two layers of potential distortion of the natural pattern of phenomena can, of course, fuse. This happened, for instance, in a rather grotesque manner, in a research project dealing with homosexual indications in Rorschach records [6]. One of the participating psychologists never found any indications of homosexuality in any of the records randomly assigned to him for interpretation. Another member of the same staff never failed to focus his interpretations on indications of homosexuality in any of the records randomly assigned to him. The semantic fuzziness of the concept of homosexuality facilitates such methodical distortions, so that unconscious projections and theoretical biases can easily fuse.

The application of the phenomenological approach is easier in interpreting Rorschach records than in interpreting clinical behavior. Rorschach records present condensed samples of observable behavior. It is harder, however, for several observers to agree on the natural pattern of observed clinical behavior since this behavior transgresses the limits of a relatively standardized situation within a limited time.

If we limit ourselves to the observations during an interview, we are still on relatively safe ground. However, we have to relate these

interview observations to all available information about the life history and environmental conditions facing the subject outside of the interview situation. During the process of integration of these observations, the risks of distorting the natural pattern of the observed phenomena multiply.

Our theoretical bias induces us to focus our attention on some aspects of the almost unlimited possibilities of information and to neglect others.

The foci of the natural pattern would crystallize themselves if we could know everything about the patient—his life history, his environmental situations during his life history, and his reactions to these situations step-by-step throughout his personal development. If such an ideal situation existed, an experienced clinician should be able, with the help of a careful phenomenological perusal of the observable behavior within its context, to discover the liminal or sub-liminal clues that indicate the circumstances under which the behavior was produced and, in turn, to make the correct clinical guess as to the underlying personality disorder or organization. In reality, we can only attempt to come as close to such an ideal as the particular case situation permits. It is impossible for us, of course, to proceed without theoretical biases; but the more we are *aware* of them, the better we will succeed in keeping them from interfering with the phenomenological task. This fact explains why some of the most theoretically committed ("seemingly biased") psychologists are among the best clinicians.

The Rorschach Use of Phenomenology

Phenomenology and Objectivity

After facing the difficulties in using the phenomenological approach in observing clinical behavior, we can happily return to its use in the study of Rorschach records. This will also bring our abstract discussion down to earth. The usual terms for this approach have been expressions like "the global use" of the record, "the clinical use" of the record, "the integrated use" of the record. Frequently these expressions carry the connotation that such procedures

lack the objectivity of counting classificatory scores and combining them into signs or sign patterns.

Such a concept of objectivity is limited to measureability and feasibility for statistical manipulation. Psychologists who are inclined to deify this form of objectivity overlook the fact that the very process of atomistic classification forgoes the possibility of using the natural pattern of the observed phenomena before trying to understand its meaning.

If we define objectivity as an approach to the "true meaning" of observable phenomena, the use of the natural pattern to its fullest possible extent is the indispensable prerequisite for objective understanding. This idea underlies the generally accepted awareness of the interdependence among scoring categories. It also underlies the necessity of combining the quantitative analysis with qualitative sequence analysis.

Research projects, like the one discussed above on pages 271-273, enable us to use the concept of measurement objectivity to demonstrate the validity of the concept of phenomenological objectivity.

Phenomenology and Personality Structure

The most important problem in the use of phenomenological method in the Rorschach technique is the task of subdividing the natural pattern of the total record into sub-wholes, without losing any of the important idiosyncratic characteristics. The divisions most generally accepted are the specific patterns of thought processes and affective processes. These two subdivisions have been created by utilizing the objective, structural characteristics of Rorschach responses (form, color, shading, and so on) in a phenomenological, rather than in a classificatory, manner. These subdivisions form a natural bridge between the structural characteristics of the Rorschach and the structural aspects of the personality.

The hypothetical clinical correlates of the two phenomenologically derived subdivisions are these: (1) reality testing and mastery functions of the ego, as reflected in the specific patterns of thought processes; (2) emotional integration and defense mechanisms of the ego, as reflected in the specific patterns of affective processes.

As pointed out in Chapter 16 of Volume I, the concern with personality structure represents the new ego-psychological orientation of the entire clinical field (psychiatry, social work, and clinical psychology). This development is not limited to any specific theoretical orientation, even though psychoanalysis has played a leading role in it. Thus there has opened up a new way of relating structural aspects of Rorschach records to structural aspects in the case history data and clinical behavior. In other words, phenomenological response structure in the Rorschach has become related to personality structure as seen clinically.

Diagnosis and Prognosis

This new development in Rorschach interpretation has changed the practical value of the Rorschach technique as diagnostic and prognostic tool, profoundly. The old limitation of validating nosological personality characteristics through group comparisons with the help of classificatory signs, was overcome. The Rorschach is now more widely used in planning therapy, rather than in confirming or modifying clinical diagnostic impressions. Even within this diagnostic function of the Rorschach, we face a shift of emphasis away from nosological categories, *per se*, toward the description of idiosyncratic thought processes and affective reactions, which, in turn, may even make the use of nosological categories more specific and meaningful.

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Differential Diagnosis

As explained in the preceding chapter, nosological categories do not offer the most fruitful departure for a discussion of differential diagnosis. Instead, we shall first investigate perceptual and conceptual disturbances of thought processes, as revealed in the Rorschach, which seem to be essential for differential diagnosis, especially for the differentiation between neurosis and psychosis. This topic is related to the clinical dimension of reality testing.

Second, we shall analyze the Rorschach characteristics of affective functioning, which serve essentially the same purpose, although the differentiation is from a different approach. This topic is related to the clinical dimension of degree and type of investment of vital energy in ego-defensive mechanisms.

Third, we shall combine these two approaches in order to arrive at a continuous schema of decreasing ego strength. This has proven to be of value not only in differential diagnosis but also in planning for therapy.

The three-stage discussion outlined in the above paragraphs will also help to demonstrate how one can proceed from a non-clinical, systematic description of the total personality organization and arrive at an understanding of the prominent psychopathological syndromes. Such a procedure will furnish us with more than merely a classification in accordance with the overt symptomatology; it will also tell us in what structural setting the symptomatology occurs and

will consequently permit us to assess the course of the illness, the ego strength, and the prognosis.

Perceptual and Conceptual Disturbances of Thought Processes

The study of perceptual disturbances concerns itself with the inaccuracies of the match between the formal characteristics of the blot and the formal properties of the object or situation that the subject projects upon the blot. Such inaccuracies range from the subtle to the gross. In the former, only response specifications—often given only in the inquiry—do not fit the blot area. In the latter, the object as a whole does not fit the selected blot area. The accuracy of the match is assessed in form-level rating. We are also confronted with this question: To what degree is the subject *aware* of the congruity or incongruity between blot form and object form? It is evident that a study of form-level characteristics reveals the way in which the subject's reality testing functions.

The basic problems and processes of form-level rating are described in Volume I, Chapters 8 and 12. The writings of Rapaport and Schafer [4, 5, 6] are permeated with detailed observations regarding disturbances of thought processes and their diagnostic significance. This section, therefore, serves a supplementary purpose in describing a few such disturbances that have not previously been covered in detail even though they are helpful for differential diagnosis.

"Poetic License" and Fabulation

Minor perceptual distortions may be found in the records of clinically normal subjects, neurotics, and incipient psychotics.

A clinically normal person, particularly the intelligent subject, often uses what one may call "poetic license." The subject focuses on the appropriateness of the fit between blot form and object in their major characteristics, and overlooks minor discrepancies. However, he is aware of these discrepancies and can verbalize them. This indicates a flexible kind of reality testing. That is, in order to better

cope with a situation, the normal person can temporarily shift into unreality and then come up with a creative solution that will improve upon reality. In Kurt Lewin's terms, the boundary between the level of reality and unreality is permeable.

A young pregnant woman, for example, saw on Card IX, "Two gossiping women with big stomachs." During the inquiry she said, "They look pregnant" and then mused a bit about the long ink marks around the head. She laughed and gave a new response of "Goddesses of fertility, with twigs sticking out from their heads." The record was an essentially healthy one, and there was no indication of disturbance.

Even minor perceptual distortions cannot be considered under the label of poetic license if the subject is not aware of them. They usually indicate the loosening of reality testing, frequently found in records of severe neurotics and borderline psychotics.

A patient with a history of schizoid adjustment and mild anti-social behavior gave a generally unremarkable Rorschach with the exception of his specifications on the first two cards. On Card I he saw a "female animal" but in the inquiry said it was "just a manner of expression." On Card II he saw a "spear's head," but in the inquiry he said that he meant the head of a spear. These weakening specifications were of insufficient severity to warrant a diagnosis of schizophrenia, especially since he could recover during the inquiry, but they certainly pointed to a schizoid personality adjustment. A somewhat more disturbed reaction was indicated by the response of another patient to Card X. He saw "some kind of fish" in the pink area, but in the inquiry said that they must be whales because they were "so big." His only apparent clinical problem was an occasional absence without leave from military service; but this disturbance shown in the Rorschach was sufficient to make the diagnosis of a schizophrenic character.

The schizophrenic character may be distinguished from the incipient schizophrenic, who also produces only weakening or moderately destructive specifications, by the relative awareness of the inaccuracy and concern about it. The incipient schizophrenic, often aware of his progressive lack of good contact with reality, tends to

be concerned about his inaccuracies. A woman who gave four original responses and a free use of movement and color to the first seven cards, saw the animals on Card VIII (minus the legs) as fish and then destructively specified that the legs were fins. She became quite disturbed by this and gave only vague responses thereafter.

From the viewpoint of differential diagnosis, a technical question is how far poetic license can be stretched before it indicates a weakening of the loyalty to reality. For the sake of convenience, this stretching process may be semantically divided into three phases, for which we choose the labels *far-fetched*, *peculiar*, and *bizarre*.

Far-Fetched Responses

A response is described as far-fetched when the organizational combination of the concept components is unrealistic, but the perceptual use of blot areas is fully appropriate to the form character of the concept assigned to them. An example is a response to the top of Card VI, "a snake with whiskers and wings." Even such a far-fetched combination as this may still remain within the boundaries of poetic license if the unusual combination has a humorous, historical, or symbolic basis. The "winged snake," for instance, plays a considerable role in various mythologies, but the addition of "whiskers" begins to stretch the license thin.

Peculiar Responses

While in far-fetched responses the combination of the response components simply lacks the convincing humorous, historical, or symbolic meaning, in peculiar responses the combination becomes infused with idiosyncratic elements which actually defy nature and tradition. If, for instance, the usual response "bat" to Card V is specified with four pairs of legs extending above and below and from the wingtips, the response may be considered a peculiar one. What is left of reality testing is the approximate fit between the form characteristics of each concept component and its corresponding blot area. But in the organization of the concept, meaningfulness, in any objective and communal sense of the word, is lost. The reality testing function of the ego has become visibly loosened.

Bizarre Responses

The step from the peculiar to the bizarre response is accomplished when the last remnant of reality testing, the fit between each concept component and the blot material, disappears completely. In the peculiar response, the subject attempts to counteract the loosening of his reality testing by paying sometimes even exaggerated attention to the fit between specifications and the blot areas used for them. The subject who gives bizarre responses is no longer troubled by any such compensatory considerations.

Magic-Wand, Fixed Concept, and Organic Perseveration

The complete disregard of the formal properties of the blot is the chief characteristic of the "magic-wand" perseveration, prevalent in children from two or three years of age. There is no correspondence whatever between the shape of the projected object and the shape of the blot. This reflects the undeveloped state of reality testing in the very young child. Occasionally, one might also meet this in very regressed schizophrenic patients; here, obviously, it is indicative of the depth of regression. More common, in very disturbed schizophrenics, is "fixed-concept" perseveration. In this case, the match between the shape of the object and the shape of the blot is fairly accurate when the response is first given; when the response is repeated in subsequent cards, however, the form of the blot is forced into the form of the object, in almost complete disregard of the actual form properties of the blot, the object, or both.

The example for fixed-concept perseveration mentioned first in *The Rorschach Technique* [2, page 160] can best illustrate this point. The subject, a 12-year-old incipient hebephrenic schizophrenic, started in Card I by seeing two Santa Clauses with Christmas trees under their arms, hanging up stockings on a chimney. This response showed no deficiencies in reality testing as yet; in fact, the material was organized and specified in a superior manner. The idea of these same Santa Clauses, however, took on the properties of an autonomous complex, a fixed idea, which was projected into all nine subsequent cards. With surprising agility, the patient could still find,

in the majority of these cards, some specifications that lent themselves to an association with his fixed Santa Claus idea. He specified the red hats in Card II, the boots in Card IV, the faces of the reclining figures in Card V, the beards of the two figures in the bottom part of Card VI, and the pointed hats of the top figures in Card IX. But he had no realization of the inappropriateness of forcing the remaining features of all nine cards into his fixed concept of the Santa Clauses. He even went so far as to set them on fire in Card II, tie them upside down to a pole in Card VI, and have them gradually disintegrate from Card VII to Card X. He thus simultaneously violated the Gestalt properties of the blot material and the meaningfulness of his concept. It is essential for such a fixed-concept perseveration that the subject has no awareness of the inappropriateness of most of his specifications and the forced quality of his organizational efforts; he does not enjoy the distortions of his concept in terms of poetic license or anything humorous, such as caricature.

An example of such fixed concept perseveration in an adult was the record produced by a 24-year-old male diagnosed as a simple schizophrenic. He proceeded through the ten cards and saw a "uterus" on each one. When queried, it turned out that he meant a woman's sexual organs. In each case he found some area of the card where the concept might fit, so that he did not grossly violate the reality of the material. The patient manifested no delusions, hallucinations, or other secondary symptomatology, but he meandered through life with no ties to people or to a vocation.

A technical device to illustrate this lack of reality testing in many schizophrenics is to ask them to make drawings of their concepts, as described in the Graphic Rorschach, by Levine [3]. It is most impressive how many drawings of schizophrenics give an unmistakable picture of the chosen object but make it impossible to have even the faintest idea to which card or which part of a card this concept has been associated. Many patients with organic brain lesions, on the other hand, produce the opposite effect in their Graphic Rorschach records. Their meticulous replicas of the chosen blots or blot areas give no clue as to what these drawings presumably represent. In this way the disturbance of reality testing of the organic patient seems to

be of a very different order than that of schizophrenics. Whereas the schizophrenic disregards reality, the severely organic patient is so caught by objects in outer reality that he fails to grasp their meaning.

This is illustrated by the performance of a 51-year-old man, who was showing progressive arteriosclerotic impairment. He was given a Rorschach in Spanish, his native tongue. He responded with more affect than he had on other tests and was obviously pleased to have the opportunity to converse in his own language; but his productions, nonetheless, were equally barren. He gave four responses, but rejected the remaining six cards with the comment, freely translated, "Maybe an animal, but damned if I know what."

The difference between the two groups is psychologically very significant. The organically-impaired subject is genuinely confused; the schizophrenic patient only *appears* confused—he is just "not there." The organic psychotic, however, tends to show both kinds of confusion and often resolves his difficulty by responding with whatever pops into his head, regardless of the stimulus. A patient who was irrational, violent, and uncoöperative during and following an acute encephalitis, saw a series of "bugs" and "animals sliced open" without the slightest concern. Several months later, when the psychosis had cleared, the patient again saw "bugs" but tried to justify his concepts. Asked to draw them, he reproduced the blots fairly well, but one could not tell which "bug" applied to which blot. When the organic residuals had cleared, his Rorschach was similar to his pre-morbid state. (See also the next chapter).

These examples illustrate how phenotypically similar behavior—confusion—may arise from genotypically different psychological constellations.

Selective Perception and Overaccuracy

"Selective perception" is found most frequently in hysterics. They seem to overlook those elements that do not fit. We see here operating a reality testing with blind spots. The hysteric simply does not see certain aspects of reality; he is "blocked" against it. Underlying this void is the mechanism of repression or denial. (See Shafer [6] Chapters VI–X.)

A man who had recently recovered from a sexual panic gave the popular response of animal skin to Card VI, but went to great lengths to explain that the tail was missing from the lower part. Asked if the upper part could be a tail, he answered that it could be; but he vehemently asserted, without provocation, that it was in no way related to the animal skin.

Exaggerated emphasis upon the accuracy of the match between blot form and object form is frequently found in compulsive neurotics. They will carefully cut away from the blot area every tiny projection that does not fit. Often they will fill in the white areas in the blot, or they will assign them a meaning, as, for example, "a butterfly with torn wings" in response to Part I. Thus they may also produce many *dr*'s. Their reality testing, correspondingly, is rigid and inflexible. They cannot withdraw into the level of unreality, even temporarily. While their reality testing is good, it is uncreative, tedious, banal. In its inflexibility, the reality testing reveals its origin in a reaction formation against distortions of reality. However, we see the impairment of reality testing in two other ways. First, the test situation does not require such exactitude of them. Likewise, life situations in general do not require such rigid delineations of what is "real." It is a result of inner compulsion, not of outer need. It is at this point that the compulsive individual actually distorts reality. Secondly, one can often observe one or two responses, in a long record obtained from a compulsive, that have one or two weakening specifications. What is defended against—namely, the influx of the irrational and unreal—tends to return. The quest for accuracy of the extremely compulsive individual is almost a caricature of accuracy. In order to be so exact, he chooses smaller and smaller blot areas to match with his percepts. In the process, only trivial objects lend themselves to be matched in this way. Thus, while the match between blot form and object is overaccurate, the content is trivial. In like manner, the reality testing of the extremely compulsive individual is so taken up by preoccupation with the minor aspects of life that he fails to come to terms with the broad issues.*

* This overaccuracy is only one type of Rorschach reaction found among compulsives. See Shafer [5] Chapter 10.

A young clerk gave a protocol of fifty responses, 80 per cent of which were unenlivened form and were largely animals, anatomy, maps, or objects. He frequently gave irrelevant, but not destructive, specifications to his concepts and was quite critical of the blot material. His overaccuracy, however, resulted in a destructive specification on Card X, where he saw "a cross-section of a fly's foot." The patient was a good worker but was having difficulty in his marriage, his wife complaining that he was "too methodical and too cold."

Transposition

A rather unique way in which the blot material can be misused is represented by a form of perceptual disturbance that seems to be quite pathognomic for paranoid schizophrenics. A descriptive name chosen for this kind of thinking is "transposition"; popular responses to specific blot areas are "transposed" to a different and most far-fetched area on the same card. A rather striking example is provided in two transpositions in the record of one subject, one in Card IX and another in Card X. In Card IX, the shaded area inside the green is frequently seen as "the head of a goat." The subject, a 32-year-old borderline schizophrenic, did not use this area, but saw, instead, "the head of a mountain goat" in the lower-outer portion of the pink area, in spite of the fact that he used this same pink area in the more usual way as "the head of a Chinaman." He rationalized the choice of this area fairly well by pointing out the horns and various specifications of the muzzle, so that one might still have been doubtful whether this represented a true transposition. He dissolved this doubt quickly when he saw the usual rabbit's head area of Card X as "the head of a goldfish," in spite of its light green color and the fact that this goldfish seemed to have two tails. He acknowledged this fact as an unusual phenomenon. It should be added that the only other peculiar specification in the entire 38-response record was the description of the long, thin protrusions of the center red area in Card II as the "swords" protruding from the head of a shrimp. Otherwise, his responses were painstakingly accurate and banal. It seems that in the response to Card X we are dealing with a transposition of the golden color from the adjacent yellow areas.

This process of transposition seems to reflect the distrust of the schizophrenic against those phenomena that seem obvious to others. His own thinking disagrees with that of the people around him, and he is quite convinced that he is right and they are wrong. Whether the schizophrenic will recognize and admit the obviousness of the popular concepts when confronted with them depends on the degree of his negativism. In his original response we can only recognize his frantic effort to locate the same concept somewhere else.

Another example, which, in this case, transposes form rather than color, is the response "caterpillar" to the upper green instead of the lower green in Card X. Another particularly striking example, because of the obviousness of the usual response, is the transposition of the bat concept in Card I from the whole card to the upper central detail.

The occurrence of these extremely negativistic perceptual distortions seems to be limited to paranoid and catatonic schizophrenics. But even within these two groups, such distortion seldom occurs more than once in several hundred records and is therefore of little differential diagnostic use in routine clinical practice. (See Chapter 9.) If one wants to speculate about both the meaning and rarity of this distortion, it might be that the distortion presupposes a still-functioning semi-awareness of "the obvious" which, at the same time, is attacked as a faulty kind of thinking. It seems understandable that few patients have the mental agility to balance themselves on such a razor's edge for any length of time.

Characteristics of Affective Functioning

General Considerations

In view of the function of the Rorschach technique in reflecting ego organization rather than overt routine behavior, an optimal point of departure for distinction among various kinds of affective functioning is the differentiation among ego-syntonic, ego-alien, and ego-dissociated affectivity.

Ego-syntonic affect is used here to refer to a combination of subjectively felt comfort, even pleasure, in the use of affectively charged stimuli—mostly color and shading—with a very even form level, optimally high for the particular subject. (See also Volume I, Chapter 12.)

Ego-alien affect is used here to refer to a more or less marked, subjectively felt discomfort in dealing with the same affectively charged stimuli, combined with a lowering of the form level in comparison with the rest of the responses.

Ego-dissociated affect, as the term is used here, can be reflected either in a complete insensitivity to the emotionally charged color and shading stimuli, or in the emotionally detached use of such stimuli for altogether bizarre responses.

There is a fourth possible relationship between ego functioning and affectivity. Where the ego organization is not deeply rooted, as in psychopathic, impulse-neurotic, or manic individuals, the ego simply becomes the mouthpiece of strong drive impulses without adequate counteraction by a well-developed sense of values or stress tolerance. In these cases, the color stimuli are freely used, but actual breaks in reality testing are avoided by the use of sweeping, indefinite, or semi-definite responses.

An example is found in the production of a psychopathic schizophrenic. He gave a number of vague whole responses; but on Cards II and III, with no discomfort and no increase in reaction time, he saw "blood right there." On Card IX he saw "green grass and flowers." This man had a long history of antisocial acts, including murder, but he was also very fond of flowers and cared for them tenderly. If someone ever dared to disturb the flowers he would attack them at once, but without any sign of anger. Such an ego-structure may be described as a "floating-island" ego.

A somewhat similar ego-organization, which might be described as a "flooded" ego, can occur temporarily in individuals who normally possess a better developed ego structure. In these cases, the observable behavior takes on the form of a temporary hysterical dissociation or even psychotic reactions. Clinically, these cases are characterized by the surprising fact that the swamped ego "dries up" after

a few weeks without any special treatment except the provision of a secure environment. These individuals return without difficulty to their previous normal or neurotic ego functioning. The Rorschach records of such "temporary dissociative reactions" are characterized by a combination of marked emotional involvement with color and shading reactions that are subjectively felt, and the conspicuous absence of any of the bizarre perceptual distortions one might expect on the basis of the delusional behavior.

A 25-year-old woman in the midst of a post-partum psychosis gave a fairly rich Rorschach of 30 responses. Her concepts were either very well perceived or merely vague, but no breaks in reality testing were shown. Three good human movement responses, two shading responses, and a hectic use of color were shown. She spontaneously remitted in three weeks. Another woman, who had the delusion that she was turning into a man, gave a variety of color responses including flowers, a painting, and "a fountain of colored lights with smoke around it." No bizarre ideas were shown on the test, but the content revealed the dynamic reasons for the delusion, which soon vanished.

Preponderance of Color or Shading

The use of color and shading, regardless of any disturbances reflected in color and shading responses, can serve to some extent as a differential diagnostic clue. The arithmetical proportion that plays the most important role in this connection is the ratio of achromatic to chromatic responses, as described in Volume I (pages 292 ff.).

Preponderance of Achromatic Responses

The preponderance of achromatic responses ($Fc+c+C'$)—the so-called "burnt-child reaction"—implies a preponderance of *anticipatory* emotions over the readiness to meet emotional situations as they arise. This does not, in itself, indicate clinical pathology, so long as the libido withheld from outward channels can flow freely into channels of imaginative activity represented by appropriate *M* production (see below).

If this condition is aggravated by an excessive use of shading as compared with the amount of unenlivened form, the anxious pre-

occupation with anticipatory emotions may reflect itself in the *character* formation of the individual, rather than in any overt symptom of anxiety. The behavioral manifestations can be shyness, oversensitivity, or overcautiousness. This can serve as a modifying counter-indicator wherever the problem of homicidal or suicidal acts enters into the diagnostic picture.

Anxiety that is evoked by frustration in facing acute emotional situations—short-range anxiety (in contrast to the anxious preoccupation with anticipatory emotions—long-range anxiety) is manifested in Rorschach records through color reactions rather than shading reactions. (See following section, pages 293–294.) Thus we are faced with two sets of anxiety clues, which are relatively easy to distinguish in Rorschach records. On the other hand, it is difficult to distinguish between these two facets of anxiety in clinically observable behavior. This fact makes it understandable why researchers have had difficulty in correlating anxiety with Rorschach clues. The rating scales used in these research projects aimed at assessing the degree of anxiety in various groups of subjects have so far failed to include this distinction. They could not be expected to produce any significant correlation with any one set of Rorschach clues.

Preponderance of Chromatic Responses

The preponderance of chromatic over achromatic responses, on the other hand, seems to be a necessary but not a sufficient condition for inferring the existence of acting-out tendencies. Whether these acting-out tendencies merely take the form of non-destructive, non-conformist behavior (like “Bohemian” tendencies) or imply real danger along homicidal, suicidal, or antisocial lines, depends on content symbolic clues, on the balancing effect of *M*, and on the stability of the form level.

A new situation arises if the preponderance of chromatic responses is not so much due to an excess use of color in the reactions of the subject as to an inadequate use of shading. (Differentiated shading scores constitute less than one-fourth of the *F* scores.) Where the record shows no tendency to shading denial, no other marked imbalance, and no clear-cut bizarre elements, this constellation usually indicates a marked schizoid element in the personality organization

of the subject. The lack of anticipatory emotions reflects the autistic isolation of the subject whose superficial reality testing might be quite intact and whose ego-tolerance for unconscious material may even exceed the average expectation. Among this type of schizoid personality can be found the pseudo normal individuals who often amaze the observer by their social success in economic achievements and lack of friction in their personal contacts. A closer scrutiny through questioning the friends and associates of such people reveals the fact (often surprising even to those questioned) that none of them has ever been able to establish a warm personal relationship with the subject.

Relative Severity of Color and Shading Disturbances

Further help in differential diagnosis can be gained by comparing the relative severity of shading and color disturbances.

Mild Disturbances

Mild color disturbance, with little or no shading disturbance, belongs in the clinically normal range of functioning. Occasionally, this combination can also be found in mild paranoid schizophrenics. However, in the latter, one or two minor perceptual distortions, unrelated to emotional disturbance, can usually be elicited by careful inquiry and testing the limits.

A 21-year-old male gave a quite adequate performance on all tests, including the Rorschach, and showed no disturbance of color or shading. Several of his responses, however, suggested minor perceptual distortions. On Card VII he saw "heads of head hunters"; on Card X he gave "ants going into an ant hole"; and on Card II he showed a tendency toward confabulation when he reasoned that it was a bird from the "beak" in the phallic center detail. These minor perceptual distortions were sufficient to warrant a diagnosis of early paranoid schizophrenia, which was later substantiated.

The absence of perceptual distortions, even under inquiry, accompanied by the presence of guardedness or content such as "eyes," is more indicative of paranoid characters. Such cases are usually found in a more schizoid context.

Preponderance of Color Disturbance

More severe color disturbances are usually accompanied by minor shading disturbances. There seems to be a relationship between the severity of the color disturbances and changes in symptomatology. An increasingly hectic shifting from one way of handling the color to another (intensive use, denial, disregard, explosive reaction, passive use, and so forth) indicates a shift in symptomatology from anxiety symptoms to phobic reactions to hysteric reactions. In pure anxiety cases the overtly expressed discomfort is concentrated on the red spots in Cards II and III. At the same time, these colors are not used for responses, while the pastel shades in Cards VIII, IX, and X usually produce a ready, submissive acceptance of the color stimuli. The more ego-defensiveness is mobilized in combating ego-alien influx, the more disturbance is shown in response to the pastel shades of the last three cards.

Preponderance of Shading Disturbance

On the other hand, very marked discomfort in dealing with shading, with practically no discomfort in dealing with color, almost invariably indicates the existences of a pseudo-normal adjustment with very deep-rooted emotional difficulties. Generally speaking, the more shading disturbance exceeds color disturbance in degree, the more we suspect that the observable surface behavior does not fully reflect the emotional difficulties of the subject.

Specific Color Disturbances

Disturbance in Response to Pastel Colors

There are some subjects who show more disturbance to the pastel shades of the last three cards than to the red spots on Cards II and III. Usually, such subjects are found on the borderline between normal and neurotic adjustment. They suffer from the conflict between their own emotional intensity and the life situation, which does not provide adequate outlets for their strong emotional needs.

An aggressive 18-year-old saw "a piece of metal that just come out

of the furnace" on Card II, a good human movement response on III, a "tiger skin rug" on VI, ballet dancers on VII, and other well-seen responses on all cards up to VIII. On the latter card he saw the usual animals as "a mountain goat" but then rejected the concept because of the absence of "horns." On Card IX he gave well-seen though aggressive "animals," but on Card X he sighed and gave "a rabbit" and "abstract art." The boy's emotional intensity had its only outlet in aggressive behavior; his softer, more tender qualities did not provide him with any satisfaction.

Another example is provided by a bright young stutterer. He showed some initial discomfort on Card II, when confronted by the red, but went on to produce responses with high form level, including original *M*'s. His performance continued to be superior until he came to the last three cards. On Card VIII he saw a colored drawing of "the insides" of a person; on Card IX, after an unusually long reaction time, he saw "witches floating over a fire"; and on Card X saw a "piece of modern art" before recovering to give responses of higher form level. He stuttered only when giving responses where he saw "women" and throughout the last three cards.

Disturbance in Response to Bright Red Color

The submissiveness of the anxiety neurotic to the pastel shades of the last three cards reflects his enormous need for tenderness and support, while his struggle with the red spots in Cards II and III indicates his fear of more passionate emotions.*

* From the frame of reference of psychoanalytic theory, the following speculation may be made. The ego position can be symbolized as having reached an insecure beachhead in the area of phallic striving, without a great deal of investment in ego defenses. The flight from passionate to tender relations represents the desire to hold this beachhead, while seeking the security of the previous overprotective environment. Usually, male subjects in this position have particular difficulty in differentiating the role of the mother from the role of the lover in their heterosexual relationships; similarly, female subjects are seeking the protective father and tender lover in the same person.

A woman with superior intelligence gave only 12 fairly impoverished responses during the performance proper. She gave the popular "dogs" to Card II but only after a long reaction time; rejected Card III; said of Card IX "It's pretty, but that's all I can say"; and then succumbed to Card X, giving "leaves, a rabbit and little animals." Card IV induced the response of "a fox terrier's head off in the distance." The patient spent most of her therapy dealing with her feelings toward an alternately austere and playful father, toward whom she was most ambivalent.

In cases where this kind of a need structure finds a satisfactory solution in a real relationship, substantially the same color picture will appear in the Rorschach. The realistic security will reflect itself in a much richer production, with a more nearly optimal form level. The existence of an anxiety state, however, has an impoverishing effect on the Rorschach record. It also shows itself in test behavior by many expressions of insecurity and desire for moral support.

Differential Color Indications in Depression and Anxiety

The degree of disturbance in dealing with color is also a helpful differential diagnostic clue in distinguishing between reactive depression—which might be accompanied by, and is often overlaid with, rather flagrant anxiety symptoms—and the depressive moods which often accompany severe anxiety states. It is frequently impossible to make such a distinction through clinical observation alone, even though the distinction is crucial for assessing suicidal danger. Subjects who suffer primarily from a reactive depression will hardly ever show any actual use of color in their Rorschach responses, since the inversion of the aggressive impulses makes it impossible for the subject to respond to any emotional challenge from the outside in a positive way.

A 41-year-old, recently retired military career man, who suffered a reactive depression, gave only five responses, all after long reaction times, two of which involved a "black bat." When questioned, during the testing-the-limits period, about bright color, he merely shook his head in a sad way. Offered several color concepts, he said "Yes, sir" and then began to weep.

The depressive mood of an anxiety neurotic, on the other hand, will lead to frequent shifts from the use of chromatic color to the use of achromatic color in a dysphoric response (sinister black, dirty gray, and the like) expressing the extreme lability and inadequate defensiveness of an overt anxiety state. Achromatic color in suicidal records is more likely used for concepts such as "something frozen."

The extreme of this fluctuation is found in the emotional instability reaction. Here the shifts become increasingly severe and the ego structure of these subjects is reflected in the complete rejection

of some cards. A young war bride, who attempted suicide several times by drinking a disinfectant, saw a leaf in Card I, men mixing a drink in III, "black dirty boots" in IV, ice and snow in VII, a child's finger-painting in X, and rejected the rest of the cards.

Occasionally such anxiety states are mis-diagnosed as depressive reactions. A 39-year-old single woman became apparently depressed when transferred from one job to another. Her tearfulness led to a clinical diagnosis of depressive reaction, and precautions were taken against suicidal attempts. Her Rorschach, however, showed considerable, though labile, use of color, and was indicative of an anxiety state. The material revealed a passive and demanding person who became anxious at any change in her life situation. Reassignment resulted in disappearance of the symptoms.

Fairly frequently one sees a very depressed hysteric whose response to color is similar to that of the depressive reaction. They, too, fail to respond to color during the performance or inquiry, but they will usually give a passive color response during testing of the limits. An hysteric who suffered occasional depressions, manifested by crying spells, hopelessness, and insomnia, but made no serious suicidal attempts, gave no color responses during performance or inquiry, even rejecting Card IX. When pressed in testing the limits, however, she saw "colored flowers" on X, but then quickly denied she used the color. Hysterics also tend to show more discomfort than depressive reactions on the colored cards, as shown by dysphoric comments or outright rejection. The aforementioned patient gave adequate responses to Card II, after a longer than average delay, and then said "Can't make too much out of that" to Card III before giving her responses. She later rejected both VI and IX.

Specific Color Clues for Anxiety Hysteria

One important indication in the Rorschach that an anxiety state has reached a phobic level is found in response to Card IX as compared to VIII and X. The mixture of shading and color in Card IX becomes acutely uncomfortable to the subject and results in the now common response "atomic explosion," or in some dysphoric content association to the card.

An interesting example was furnished by a Chippewa Indian serviceman who appeared clinically as a classical conversion reaction. He had been unable to move his fingers when about to fire his weapon on the rifle range, but this paralysis disappeared during hypnosis, sleep, and during sodium amytal interviews. During the regular interview, he manifested the *belle indifférence* often found in conversion reactions, but the Rorschach revealed him to be much better integrated than the clinical findings suggested. He gave good human movement and color responses to the first three cards; but to Card IV he gave an "X ray," after a long reaction time, followed by the concept "a man who has been shot." He recovered quite adequately, but when offered Card IX he struggled with it for almost five minutes before giving up. On Card X he saw various "flower" responses. During testing the limits, he admitted that Card IX disturbed him a lot and specifically mentioned that the colors and shading bothered him particularly. Further interviews revealed that the patient had had fantasies of killing his father, which he had repressed, but these had been reactivated by being in the service and being on the firing range. The Rorschach was instrumental in revealing the essentially phobic basis of the symptom and the fact that the ego-structure of the patient was better than was first believed.

A further complication of the phobic picture results from the addition of traumatic experiences, as in so many war neuroses. This leads often to a disturbed anatomical response (diseased organs) or to concepts of mutilated bodies. This occurs mostly in Card IX but also extends to Cards VIII and X.

This neurosis is fairly rare in the civilian population and is also seen less frequently in United States military settings now than it used to be. The experiences of World War II and the Korean conflict led to the treatment of these individuals as close to the front lines as possible, with rapid return to duty; the results were favorable. One case, however, of a sergeant who had performed successful combat duty in both World War II and the Korean conflict, is illustrative of the occasional mis-diagnosis of such problems. Returning on the ship from Korea, the patient fell, striking his genitalia and pinning his testes between his leg and the ship's railing. No severe injury

resulted, but following minor treatment the patient suffered ejaculatio praecox, nervousness, and tension, and was quiet and withdrawn, sometimes feeling that people looked at him and laughed. He slept poorly and had dreams of animals chasing him. He was diagnosed as a paranoid schizophrenic, given 18 weeks of subcoma insulin without any satisfactory result, then referred to another hospital and given psychological tests. His Rorschach was impoverished, but showed no break in reality testing. He gave several anatomy responses and was particularly disturbed by Card VI, as might be expected, but gave the popular animal hide response. On Card IX, however, he saw, with much anxiety, "mutilated genitals" and then rejected Card X. Diagnosed as a traumatic neurosis, he received brief psychotherapy with subsequent clearing of symptoms.

A less severe instance of such trauma is found in some psychosomatic illnesses. Generally, some anatomical concept is given to the last three cards, but no acute discomfort is shown throughout the record. A 42-year-old asthmatic gave a fairly prosaic record, but on IX he saw "a picture of a body under a fluoroscope" and on X saw "almost like the last one, but a different view of it." Somatization almost always involves the perception of anatomy but, of course, the converse is not necessarily true. Usually, anxiety reactions (see above) show more apparent disturbance throughout the record and especially when giving anatomy, whereas the somatization reactions are not so disturbed. This is made understandable by the fact that the latter's anxiety is bound by the somatic symptoms.

Color Denial and Color Avoidance

Color avoidance and color denial are defined in Volume I (page 340). *Color denial* seems to correspond to the phobic inhibition of the emotional impulse, in contrast to the isolation of the compulsive who deliberately chooses responses in which the color is automatically meaningless. The latter is *color avoidance*.

An example of phobic color denial is provided by the record of a 39-year-old man whose only clinical symptom was a fear of high places. On Card III he said, "The red in the middle looks like a bow tie." He spontaneously said, in the inquiry, "Disregard the color."

He responded similarly to the last three cards. During testing the limits, he at first insisted that he disregarded the color, but when pressed said that perhaps the color helped in response of "explosion" on IX. Pressed to give other color responses, he gave "colored flowers" to Card X.

An example of compulsive treatment of color is provided by the young clerk, mentioned earlier, who showed compulsive accuracy in his responses. He gave only one color response in his 50-response record, namely "yellow seeds" on X. Throughout the rest of the record he gave such responses to colored areas as human and animal heads, anatomy, and maps.

Color Naming

Color naming is defined in Volume I (page 191). Color naming has long been considered a pathognomic clue for organic brain lesions. Its occurrence in schizophrenic records, however, has also been amply demonstrated. It seems to occur most frequently among schizophrenics who are in a tenuous remission from a florid psychotic reaction and who are trying to avoid any kind of fantasy. A 25-year-old male who was acutely psychotic, but cleared after receiving electro-shock, was given a Rorschach shortly after his clinical recovery. He saw "land and water" on Card I and then proceeded to name the colors on the rest of the cards. Offered populars, he accepted them when he was convinced that the examiner saw them too. A paranoid schizophrenic in a precarious state of remission rejected all ten cards, saying he saw "nothing" or "just colors."

Color naming also occurs quite characteristically in the records of preschool children, who want to demonstrate the newly acquired skill. Usually they combine the naming of the color with a magic perseveration of a concrete concept like "cloud" or "mountain."

Overrideational schizophrenics are more inclined to state the number of different colors or shades they can identify, interspersed with other responses.

The color naming of subjects with organic brain lesions seems to express their perplexity in the face of a situation that is too complex for their grasp. The predicament of the preschool children is similar,

enriched, however, by a touch of word magic. In schizophrenics, the function of color naming or counting seems to be a purely magical device to ward off the "demoniacal" element in the emotional charge of the color stimulus.

Bizarre Color Responses

When schizophrenics do use color, they tend to give their most disturbed responses. "Rotten trees" or "decay" are frequently given as their responses to the last three cards. A 17-year-old chronic schizophrenic gave generally vague responses but saw "a tree rotting and falling apart" on Card VIII.

Catatonic schizophrenics tend to either one of two extremes. Either they pay no attention whatsoever to the existence of color in the stimulus material, or they use color more frequently than other kinds of schizophrenics. Their use of color is sometimes as extensive as that found in hysterics, but shows the peculiar detachment that distinguishes them sharply from the latter. One always finds some bizarre content or perseveration to make the diagnosis easy. A case in point is that of a 21-year-old male who, when failing in his attempt to become a priest, felt that he talked with God and became agitated. He perseverated "microscopic organisms" throughout the cards, but gave other concepts as well. On Card II he saw "baby pigs, froze to death—the blood." To III he said, "all I see is blood" and on the last three cards he saw "nice colored paintings and flowers."

Sometimes the hysterical disturbances can reach the level of a psychotic dissociation, resulting in peculiar color responses which almost seem bizarre. The example mentioned below (page 305), of the 27-year-old war widow with a temporary dissociative reaction, is also appropriate here. She saw on Card II "a woman having her period and also having her tonsils out." This shows an organizational overextension that is, to say the least, far-fetched. In fact, the obvious relationship between this response and one of her clinical symptoms (cessation of menstruation) gives it a peculiar flavor. It lacks, however, the bizarre combination of "baby pigs, froze to death—the blood" mentioned above. In the man's case, affect was detached; but in the war-widow's case the subject was highly aware

of her personal involvement in the response. She even looked questioningly at the examiner while she gave it.

A further aid in differentiating this temporary dissociative reaction from a typical schizophrenic reaction lies in the fact that the content of her human movement responses reveals the nature of the delusional material. She had the delusion that she was a dead person, living only as bones and, hence, no longer menstruating; she also had the delusion that she had become the devil. On III she saw "two dancing skeletons" and then "devils around a fire."

Specific Shading Disturbances

Some of the specific shading disturbances, in addition to maximal and minimal use of shading, are a negative attitude to the stimuli and specific shading content. (For a description of the negative attitude toward shading see Volume I, pages 346-347, 696-697.)

Negative Attitudes toward Shading

Three negative attitudes toward shading seem to indicate severe difficulties regarding the subject's need for affection.

1. *Shading insensitivity* would indicate a complete crippling of the need for affection. It would, therefore, be a counterindication for a neurotic condition and would suggest an extremely poor prognosis for psychotherapy. For example, an examination of the protocols of fifty typical antisocial characters, part of an ongoing research project by one of the authors, revealed insensitivity to shading in all of these records. Before assuming insensitivity, we must exclude semantic barriers in the communication between examiner and subject. It takes considerable skill in the inquiry and testing of limits to get across the meaning of shading to subjects of low intelligence and limited cultural differentiation.

2. *Shading denial* would indicate an extreme conscious effort to reject the need for affection. It would counterindicate a psychotic condition, but would indicate a favorable prognosis for psychotherapy. An exception to this is found in extremely guarded early paranoid schizophrenics who reject the need for affection since it involves an element of unconscious homosexuality. These patients are

also unwilling to commit themselves on anything for fear of losing their contact with reality and also because of the fear of being "found out." Shading denial does not, therefore, indicate a comparable favorable prognosis for them. An example is found in a 33-year-old man who felt that his coffee had been drugged but was not certain about this, although he offered a number of "proofs." He gave the response of "ground, someone drilling for oil" to Card VI, but denied that the shading had anything to do with it. Later offered the popular animal skin concept, he said "it could be," but only after he was convinced that most people saw it too.

3. *Shading evasion* takes a middle position between these two extremes. It may occur in both neurotic and psychotic conditions, but it seems to occur most frequently in alcoholics or other types of addicts who are unable either to face or to reject their need for affection and therefore try to evade the issue.

Specific Shading Content

Some differential diagnostic clues in responses to shading are revealed by the content of shading responses. The role of dysphoric shading content has been mentioned previously. A more specific and subtle differentiation is afforded through the content elements that imply "softness" or "hardness" of the object seen. It seems reasonable to speculate that a preponderance of "soft" aspects emphasizes the needs for tender affection prevalent in oral-dependent character formations, while a preponderance of "hard" objects expresses the subject's skepticism about obtaining gratification of such needs for tenderness. Furthermore, there are a number of blot areas usually associated with soft objects, many of them specifically associated with vaginal formations. If a male subject specifically visualizes hard and unyielding objects in those areas, a severe disturbance in his heterosexual adjustment can be assumed.

Abrupt alternations in visualizing soft and hard objects, especially where the same blot areas are used for both purposes, may reflect acute conflict and confusion in the anticipatory feelings of the subject.

Finally, the way the patient handles the shading properties of the

various blots, as elicited in the performance, inquiry, and testing of limits, is of crucial importance in the assessment of potential ego strength and prognosis. When disturbance in the shading is initially severe and recovery is subsequently made, the resources are considerably greater than if the reverse is the case. The 27-year-old war widow with a temporary dissociative reaction gave particularly disturbed responses to the heavily shaded cards. On Card IV she saw a "Frankenstein monster with the edges falling down." She tended here toward a confabulated response since she reasoned it was a monster from the head. On Card VI she saw, "the holy spirit represented in the Catholic religion with golden rays coming out from the center." On Card VII, she recovered somewhat and saw the "coat of a sheep," but only the "edges" reminded her of this. Finally, in the limits phase, when offered the concept of the animal hide on VI, she enthusiastically accepted it and began stroking the blot. However, in the "vaginal" detail of Card VII, she saw only "a bone." The patient responded very well to intensive psychotherapy—was on the open ward within two weeks and was adjudged completely remitted in two months.

Movement Responses as Differential Diagnostic Clues

General Considerations

The relative scarcity of *M* in the records of the overwhelming majority of all cases of psychiatric disorder, and in the so-called "clinically normal" population, becomes easily understandable if we study the interpretative meaning of *M* as previously discussed (especially in Volume I, pages 366–373 and 576–578). The development of constructive ego functions has to reach a maturity level that lies beyond the reach of 80 or 90 per cent of the general population, in order to enter the process of self-realization for which the production of *M* is most indicative. Simultaneously, any investment of vital energy in ego-defensiveness has a negative effect first of all on the function of self-realization.

There are only a few clinical exceptions to this general rule. There are conditions wherein the ego tolerance for unconscious material is

preserved or even heightened, while life energy is withdrawn from the ego functions dealing with reality testing and active and passive mastery. Within the neurotic area, this is specifically true for the reactive depressions. Rorschach claimed that the main differential diagnostic clue between psychotic and neurotic depression was the existence of considerable *M* production in the neurotic depression. (His further assumption, that neither of the two conditions permitted the use of color, was found to be more reliable for the neurotic depressions than the psychotic depressions. In psychotic depression, occasionally the breakthrough of a "blood" response may be found.) Recent empirical studies of neurotic depressions, studies that have been controlled for intelligence, have raised some doubts concerning the validity of this claim. But the scarcity of *M* production in psychotic depressions seems empirically correct.

M Production in Schizophrenia

Within the psychotic realm, two types of schizophrenic patients show considerable *M* production: the over-ideational schizophrenic, who teeters on the edge of an incipient paranoid schizophrenic break with reality, and the "encapsulated" paranoid schizophrenic. In the latter condition it seems that the ego-remnant, left after a partial fragmentation, protects itself against further fragmentation through a walling-up process, which withdraws as much libido as possible from contact with the outside world. In this manner, it preserves a considerable proportion of its integrative capacity to the point where a very strange, but sometimes strangely productive, form of self-realization can take place.

An example of this is found in the record of a 40-year-old woman who had been hospitalized a year earlier, as a paranoid schizophrenic, following her purchase of a gun to use on her husband. After some brief insulin therapy, she was discharged from the hospital. Later she was re-referred by her attorney because she had been collecting guns and loaning them to questionable characters. Tests revealed her to be in a fair state of remission. The material showed that she thought of herself as an Amazon compared to puny men. Her giving of guns to criminals was a distorted evangelistic attitude

of reforming them and a symbolic offering of her own masculinity to "real men," thus restoring her basic need to be a woman. Her Rorschach was a rich one from the point of view of productivity and included nine human movement responses. Form level was fairly good throughout, but the detached color responses and the peculiar thought content revealed the disorder. She gave many responses to all cards, but some of her responses to Cards III and IV are particularly instructive. On Card III she saw first "two silly men disputing over a pot," then "more blood," "some of the blood shaped like a heart, a human heart, not a valentine," and then a "sword in the center," and, finally, "sexual symbols." On Card IV she gave the response "a female figure with a sword, leaning forward and striking out for good." The record is illustrative of the strangely productive self-realization and living-out of the apparent "intentions" of the unconscious. It is perhaps just such strange self-realization that makes some ambulatory paranoid schizophrenics so individual and leads them to live the peculiarly interesting lives that often fascinate members of clinical staffs when such a case is presented.

The more striking forms of this disorder are found in those schizophrenics who are able to engage in bizarre but artistically valuable creative work. The less conspicuous of these encapsulated schizophrenics represent the majority of those highly intelligent paranoid schizophrenics who never deteriorate mentally and who can engage in rather complex philosophical and scientific discussions, but who have no lasting desire to leave the protective walls of the hospital environment or whatever "four walls" are protecting them. They lack any trace of competitive impulses. When engaged in psychotherapeutic efforts, they can make and break contact almost at will, so that the transference never reaches a level of intensity that could serve as a therapeutic lever. (Contrast pseudo-normal individuals with investment in outer achievement, described on page 294.)

The *M* productions of these two types of psychotics show little that is bizarre, except for occasional peculiar organizational overextensions and unnecessary personal references. The *M* responses found in other types of schizophrenics, especially agitated catatonics, are characterized by the peculiarity of their content as well as by the bizarre

form-level elements entering into the formulation of the concept. They are found in few catatonic patients, but then in considerable number.

A young woman in the early stages of a catatonic schizophrenic reaction gave only one *M* during the performance proper, "a headless ballerina whirling" to Card I. At first she denied other human movement responses during testing the limits. With some encouragement, however, she proceeded through the cards and gave at least one such response to every card, all of which were bizarre.

M in Non-Schizophrenic Functional Psychoses

Among the non-schizophrenic functional psychotics we again find two clinical groups that engage in considerable *M* production. One of these groups is the manics, who produce an overflow of both *M* and color and therefore do not present any differential diagnostic problem. The minus elements in their *M* responses lack the bizarre quality; the negative form-level elements prevalent in their *M*'s are best described as produced by extreme carelessness or lack of interest in fitting the form qualities of the concept to the form of the blot. This is in contrast to the more frequent schizo-affective psychotics, who also produce an overflow of *M* and color but give bizarre content and violate the reality of the blots. A 27-year-old woman who was clinically depressed and somewhat agitated gave, in 18 responses, a rich combination of movement and color. All of these responses had a bizarre quality. On Card X she saw a weird combination of spiders and praying mantises who fell off a cliff down to a waiting squid, while two animals held themselves together and used themselves as a bridge. On Card IX she saw "a pair of witches rising from fumes coming from hell."

The true manic-depressive, as contrasted with the schizo-affective psychotics, are very rarely seen clinically, since they frequently tend to make some sort of adjustment to their environment or are not referred for testing because they represent no diagnostic problem clinically. A very naive young girl of 19 who had always had mood swings, which were now becoming more frequent and more intense, was described in an interview as follows:

"Her emotional lability and mood swings are marked in their temporal frequency. Within a few minutes she goes from a happy and vivacious euphoria to a depressed, fatigued, and withdrawn dysphoria. These cycloid swings are rapid but not intense. She barely reaches the hypomanic stage, becoming loquacious, charming and gay, but not hyperactive, and then sits staring into space, withdrawn into a romantic idyl of Weltschmerz."

The patient had attempted suicide and had the idea that the left side of her brain told her to do bad things, but the right side helped her against these. The Rorschach was instrumental in establishing this as a manic-depressive psychosis rather than an hysterical psychosis. The patient produced a large number of responses involving movement, chromatic and achromatic color in a both euphoric and depressed way. Her concepts were rich but careless. For example, she saw Card X as "a garden with trees, flowers, frogs, fountains, animals and all sorts of things," but was completely disinterested to specify. She saw people on Card II who were "dogs or bears or ladies or men dancing." The absence of bizarre content and the presence of minus form-level elements arising out of carelessness helped establish the diagnosis.

Cycloid and hypo-manic individuals also tend to produce dilated psychograms (much movement and both achromatic and chromatic color with little pure form) but produce no minus elements. They may also produce anatomical responses or other indications of anxiety.

The second of these non-schizophrenic groups was described previously by the term temporary dissociative reaction. Among such patients are those whose dissociation is the result of stress on a poorly integrated ego or immature personality. No conspicuous *M* production has been observed in them. Temporary dissociation of an essentially phobic or anxiety-hysterical personality is usually accompanied by considerable *M* production. The latter are peculiarly liable to be misdiagnosed clinically as schizophrenics. Somatic treatment, especially electro-shock, is generally of no avail and even results in further damage to the patient.

A 37-year-old physician—who, following alcoholic intoxication, be-

came hostile and subsequently disoriented—was diagnosed as schizophrenic. His Rorschach was quite a rich one, with considerable use of well-seen *M* responses. There were no minus form-level elements, but much anxiety was shown. The material suggested that the patient had undergone a homosexual panic which led to a temporary dissociative reaction. Fortunately, the planned electro-shock treatment was not instituted, and the patient spontaneously remitted with a few weeks of rest and support. The “flooding” of his ego structure may have been facilitated by his alcoholic indulgence.

FM Clues

FM does not seem to lend itself to differential diagnostic purposes in any clinical area, despite its usefulness as an indicator of ego attitudes to drive impulses. The one conspicuous constellation where a relatively frequent use of *M* and *m* is accompanied by an avoidance of the use of *FM*, to the point where even the animals in Card VIII are only reluctantly seen in some live position, expresses a severely suppressive, resistant attitude toward drive impulses. This, however, is not specific for any clinical entity. For further elaboration see Volume I, pages 578 ff.

m Clues

The differential diagnostic role of *m* is somewhat more decisive than that of *FM*; in fact, the existence of three or more main, or additional, *m* scores in any record can serve as an indication that either no psychotic ego-fragmentation has taken place or that the ego is still successfully defending itself. Where such *m* production coincides in the same record with clearly bizarre responses or verbalizations, the expectation is justified that the differential diagnostic assessment of the subject will meet with considerable difficulty, which will also be found on the clinical level.

An example of such a case with conflicting diagnoses was a man with a history of antisocial behavior who began to show ruminations and attempted suicide. His case was variously diagnosed as a character disorder, reactive depression, and psychotic depression. His Rorschach comprised a series of adequate animal concepts, inter-

spersed with sexual content, dysphoric achromatic color, and expressions such as "to be truthful I see. . . ." The crucial differential diagnostic clues came in the responses where *m* was involved. He saw a "bleeding rectum" on Card II, an "exploding volcano" on IX. The impression was of an early schizophrenic, which was later verified by the occurrence of a delusional episode.

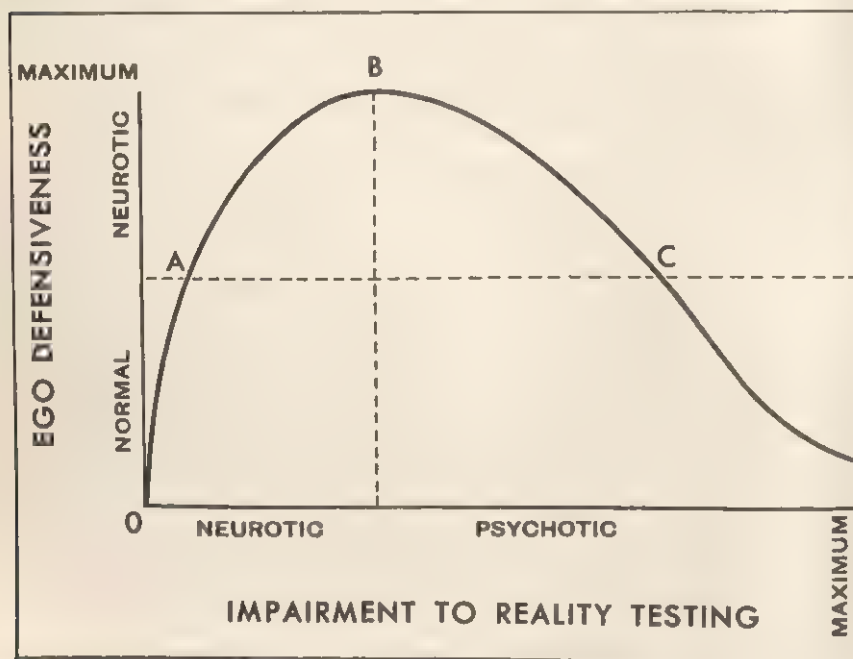
In a similar way, the existence of three or more *m* scores can also be used as a cut-off point in excluding acting-out tendencies in the evaluation of neurotic patients near the borderline of character disorder. Neither of these diagnostic uses is indicated where the answers producing the *m* scores show either negative form-level characteristics or are exclusively of the "abstract force" variety. This is especially true where the "abstract forces" visualized have the magic power characteristics specific for paranoid schizophrenic delusions. They are also counterindicated when the *m* concepts are more like repressed *M*. An incipient paranoid schizophrenic saw "bodiless hands going to grab me," an axe "ready to chop away at somebody," and a penis "going to fuck me all up."

A man who had for two years maintained the belief that communists were after him and repeatedly reported this to the FBI, gave an impoverished and guarded Rorschach, but did not seriously violate the reality of the material except for two *m* responses. One response was of "power impinging on the center," and the other was of "electric wires in vibration." The patient had maintained a precarious ambulatory state, but was in constant danger of full disintegration. The *m*'s reflected this tension.

A third borderline which *m* responses help to clarify is the distinction (for purposes of personnel assessment) between impulsive, clinically normal people—who can master and utilize impulsiveness in the service of their vocational exploits—and those in whom their impulsiveness would serve as a vocational handicap. An explanation of this differential diagnostic function of *m* can be found in Volume I (pages 579–580).

Schema of Diminishing Ego Strength

Deficiencies in reality testing (as revealed by disturbances in thought processes) and the investment of vital energy in ego-defensiveness (as revealed in subjectively-felt discomfort in handling the emotionally charged stimuli of color and shading) seem to be the two main contributors to what can be described as diminishing ego strength. Therefore, a conceptual schema that combines these two components of diminishing strength, as in two axes of a system of coördinates, may be helpful in visualizing a continuous series of conditions represented in the figure "Pathway of Diminishing Ego Strength."



The idea behind this conceptual schema begins with the hypothetical assumption that we would have some means of measuring the relative ego strength in a random sample of human beings. With the

help of such a hypothetical measure, we would be able to line up these human beings in a single file, beginning with a person with maximum ego strength and ending with a person of minimal ego strength. The individuals in this single file are then fitted into their respective positions within the system of two coördinates mentioned before. Each is placed on the graph, indicating simultaneously the degree of investment in ego defenses and the relative impairment of reality testing. According to our general clinical experience, the approximate result of such a placement would be the kind of hypothetical curve shown in the figure.

The beginning of the "pathway" at the point where the two coördinates originate, marked zero, would indicate the place of the "ideal type" concept of the "normal personality." He shows no impairment of his reality-testing and is, at the same time, fully secure within himself so that he does not need to invest a significant part of his available vital energy (libido) in ego defense. From this zero point to point A in our figure would be the realm of the "well-adjusted," clinically "normal" individuals. This would imply that an increasing investment of vital energy in ego defenses goes along with a minimal impairment in reality testing.

The segment of our hypothetical curve from point A to point B represents the clinical realm of neurotic adjustment. Investment of vital energy in ego defenses exceeding the level represented by point A would reach a point of diminishing returns for such investment at point B. This is due to the fact that such overinvestment is less able to prevent impairment in reality testing. Furthermore, it does not leave sufficient vital energy for the constructive ego functions of integration and self-realization. The increasing impairment in reality testing is due to the fact that the rigid and constrictive effect of intensive ego-defensiveness interferes more and more with the adequate handling of reality testing and mastery.

The part of the curve from point B to point C represents what is clinically considered the borderline area between neurotic and psychotic reactions. Ego-defensiveness has gone beyond the point of diminishing returns and becomes more fragmented, while deficiencies in reality testing increase to the point where the need for ego

defense becomes obviated to the point of loss of contact with reality. Paradoxically, the level of ego-defensiveness of persons placed near point C is approximately the same as the level of ego-defensiveness of persons placed near point A, since the amount of vital energy needed to defend an almost normally secure ego corresponds to the amount of vital energy used in the defense of a partially fragmented, weak ego. This explains, among other things, why many paranoid schizophrenics who manage to encapsulate their partially fragmented ego and maintain a fairly extensive area of normal reality testing give, both clinically and in their Rorschach records, the impression of being only mildly disturbed emotionally. The part of the pathway from point C onward is meant to be asymptotic to the baseline and represents clinically the position of most completely psychotic individuals, whose reality testing approximates the maximum of deficiency while the fragmentation of the ego progressively eliminates any need for defensive measures. In a way, one could say that the defense of the personality organization is accomplished through a sacrifice of the ego functions. The unconscious complexes reign autonomous and supreme.

It should be emphasized that this pathway is not meant to be the pathway of any single individual. It is meant primarily as a composite picture of any number of individuals from a completely random sample. Most patients travel only a comparatively short distance on this pathway during the course of their disease and recovery. The practical purpose of this conceptual schema is to serve as a locating device, helping to ascertain in which area of the graph any individual can be visualized and in which direction he is apparently moving.

The possible value of such a locating device, not only for individual diagnosis and prognosis but also for research projects dealing with group trends, can be exemplified through a project investigating cancer patients [1]. The problem to which the project devoted itself was to examine the possible psychological indications connected with the rate of growth of cancer in human beings. As part of this project, the Rorschach method was used in order to discover possible

personality differences between patients with fast-growing cancers and patients with slow-growing cancers. In a preliminary survey, it appeared that the Rorschach records of patients with fast-growing cancers showed a maximum discomfort of the subject in dealing with the emotionally charged color and shading stimuli, combined with minimum deficiencies in reality testing. The Rorschach records of patients with slow-growing cancers, however, showed either an exceptionally tension-free normal adjustment, or a typically psychotic fragmentation of the ego-defensive functions. Subsequently, blind guesses were attempted, based merely on the sex and age of the patient and his Rorschach record, to identify the rate of growth of cancer. All patients whose placement on the curve was below the dotted line connecting points A and C were correctly identified as slow-growing cancer patients. All patients whose Rorschach records indicated a placement between points A and B were also correctly identified, but as fast-growing cancer patients. The identifications of patients whose Rorschach records placed them between points B and C was not better than chance. It was difficult to decide whether the beginning fragmentation of their ego functions had reduced the need for ego defenses sufficiently to close the doors to a fast growth of cancer. In other words, the increasing disloyalty to reality may have given the ego structure sufficient release from strain to enable the organism to hold its own against the onslaught of cancer.

In any case, a possible conclusion from this experiment could be that an overinvestment of vital energy in ego defenses deprives the human organism of the vital energy needed to fight the onslaught of cancer, while a release of tension brought through the loosening or losing of the contact with reality enables the physical organism to hold its own against the growth of cancer. This same positive effect can, in rare cases, be achieved through maximum security in normal adjustment, which also leads to a minimum of investment of energy in ego-defenses. A further step in trying out the value of this conceptual schema would be to apply it to similar disease conditions like tuberculosis, where connections between the speed of recovery and emotional status of the patient have long been suspected. If borne

out by further research, these connections would appear to be an important verification of Jung's assumption that the unconscious part of the human psyche has important healing functions to offer.

In order to determine not only the placement of any individual patient on the curve at the time of observation but also the direction in which the patient moves under the impact of the disease or of the therapeutic procedure, it will be helpful, or in many cases even necessary, to have at least two Rorschach records taken at different times. Sometimes the sequence effects within one Rorschach performance, especially indications of recovery or further disintegration in responses to the last three cards, permit some guesses on the basis of a single Rorschach record alone. The details of such assessment and of recognition of clues for subjectively-felt discomfort with color and shading stimuli, and for indications of deficiencies in reality testing through careful study of form-level indications and variations, are discussed in Volume I (pages 249 to 351).

One limitation on the use of this schema in differential diagnosis is posed by those patients who were described previously as individuals whose ego organization is not deeply rooted, as in psychopathic, impulse-neurotic, or manic individuals. The lack of depth obviates, for these individuals, the need of following the path of diminishing ego strength as visualized in our conceptual schema. In times of stress, the ego organization of such individuals does not need to invest vital energy in ego defenses to the point of fragmentation of the whole ego structure. Symbolically speaking, the ego organization of such individuals, when exposed to strong drive impulses or other unfavorable adjustment conditions, simply pulls up its shallow roots and transforms itself into some sort of floating-island structure until it finds a chance to settle down again. Therefore, the level of ego-defensiveness in such individuals always remains relatively low while they are moving below the dotted line indicated by points A and C in our schema, from minimal to maximal deficiencies in reality testing, depending on internal and external stresses. Quite frequently, the loss of reality testing in such cases is not visible in *perceptual* disturbances, nor even in the more simple forms of *conceptual* dis-functioning, but mostly in a lack of long-

range judgment combined with a lack of a clearly established hierarchy of values.

Concluding Note

After working one's tortuous way through the labyrinth of this chapter, most readers, exposed to the normal clinical pressures, will probably miss a nosological compendium, all our previous explanations notwithstanding. The only compensation we have to offer for this unavoidable frustration is a subject-matter index that faithfully lists every reference to nosological categories. Anything beyond this meager substitute seems to us to be too much of a good thing. It would only mislead the inexperienced Rorschach interpreter; and it would provide the experienced Rorschach clinician with an easy triumph, in that most of his own cases would not fit the descriptions in such a hypothetical "cook book."

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Diagnosis of Organic Brain Damage in the Adult

This chapter is oriented primarily to the needs of the graduate psychology student who is beginning his clinical training. For the most part, the approach is integrative and empirical, and the writer does not propose to offer much that is new but rather to review what is old and has stood the test of both experimental and clinical trial and to endeavor to bring some meaningfulness and order to the jumble of information acquired by the average student regarding independent test "signs" and variegated test batteries which have been described in the literature. It is hoped that, secondarily, the psychology student will be able to improve his approach to research via the use of psychological instruments in the detection of brain damage as a result of the suggestions made here. However, diagnosis of the individual case will be the first consideration.

There has been a gradually increasing improvement in the psychologist's ability to apply psychological tests in the diagnosis of brain damage ever since the advent of the intelligence test. The problem of intellectual deficit due to brain damage has been the primary concern of most psychological investigators—which is very understandable, since the brain is presumably the anatomical seat of intelligence. The problem of emotional deficit or emotional dis-

NOTE: The author wishes to thank the many colleagues who encouraged the writing of this chapter and made helpful comments about the manuscript.

turbance in the brain damaged patient seems to have been of concern even in ancient times [59]. The opportunity for investigation of this aspect of the diagnosis of brain damage was made particularly favorable by the advent of the Rorschach test. However, the use of Rorschach diagnostic "organic signs" has, for the most part, stressed the intellectual aspects of the patient's approach to this test rather than the emotional significance of his behavior in dealing with the stimulus. And yet the Rorschach, probably better than any other instrument, reveals the fallacy of trying to make a diagnosis of organic impairment by considering only the intellectual factors involved (such as memory, conceptualization) while ignoring the patient's emotional reaction to the changes he is experiencing in his capacity to cope with his environment. In this paper an attempt will be made to present an integrative approach to the use of both intellectual and emotional factors in the diagnosis of brain damage.

Selection of Literature*

In referring to the literature, no effort will be made to include all the publications dealing with brain damage, for to do so would be a cumbersome procedure which would defeat one of the main purposes of this chapter, simplification. Instead, a variety of representative papers will be used as corroborative and illustrative material for the integrative approach made here. Some of these papers [particularly 16, 22, 45, 58, 59, 60] have extensive bibliographies in English, German, and French to which the student may refer for additional reading. The references listed for the Rorschach test represent a

* Since completion of this chapter a number of good papers on brain damage have appeared in the literature. Three of these papers offer a comprehensive and valuable review and discussion of the literature related to their chosen topics:

Klebanoff, S. G.; Singer, J. L.; and Wilensky, H. "Psychological Consequences of Brain Lesions and Ablations," *Psych. Bul.*, 1954, 51, 1-41 (307 references).

Milner, B. "Intellectual Function of the Temporal Lobes," *Psych. Bull.*, 1954, 51, 42-62 (111 references).

Yates, A. J. "The Validity of Some Psychological Tests of Brain Damage," *Psych. Bull.*, 1954, 51, 359-379 (69 references).

more complete coverage of literature on that test than for any other area but are not exhaustive.

The literature chosen has not been confined to clinical and experimental data surrounding the use of tests, although most of it concerns these procedures. In addition, a number of books and articles presenting various theoretical approaches to the problem of brain functioning, case studies and personality and behavior discussions by neurologists and psychologists, and some of the work on experimental production of brain lesions have been included. The purpose of including articles not confined to tests *per se* has been to present a number of appropriate references to which the student may turn for the background he must necessarily acquire if he is to attain sound clinical judgment in evaluating the test performance of the brain injured. No literature confined strictly to the teaching of neuroanatomy has been included. Some knowledge of neuroanatomy, as supplied by any good textbook on the subject, should be regarded as a prerequisite for the reading of this chapter and any of the references listed in the bibliography.

Articles referring to test procedures that furnish deterioration "quotients" or "T scores," which presume to give a diagnosis of brain damage by means of a single score, have been omitted; extensive experimental evidence has shown that the representation of brain damage by means of a single quantitative score is an uncertain and invalid procedure. Goldstein [16] has explained why this approach to diagnosis fails. He says that the diagnosis of organic deterioration is dependent more upon how the individual tries to arrive at a solution than upon whether or not he does arrive at a solution. In omitting discussion of tests of which the final score is represented by a deterioration quotient, it is not intended to imply that the tests themselves are of no value; indeed, any instrument tapping any area of intellectual or perceptual functioning has some diagnostic value. These instruments are useful when judged qualitatively in addition to their quantitative aspects, and their quantitative aspects must be judged separately and not as a total score. For example, it is not possible to add such disparate functions as memory, visual-motor performance, and response time and come out with anything very

useful in terms of differential diagnosis. The quality and quantity of these functions must be considered separately and in terms of intellectual level, occupation, educational and even cultural background, and still other factors. Thus, while the content of these tests can have value, because the tests are designed in such a way that their findings are put to a use that has not proved of value in the clinic, the employment of such tests will not be recommended to the beginning student. Full credit should be given to the makers of these instruments, and to their users who have reported their findings, for their contribution to the study of the diagnosis of brain damage. They have taught us well that we cannot hope to simplify the problem to the extent of giving a diagnosis by means of a few scores and that there may be no substitute for the clinical judgment of the skilled individual examiner as he observes the performance of his patient upon an instrument which the examiner has applied repeatedly to many different kinds of patients.

The literature to be referred to in this chapter will not be discussed further in a separate section. Instead, from time to time reference will be made to the opinions and findings of the various authors, as needed for illustrative purposes or confirmatory experimental evidence to support the clinical approach to be recommended.

Background Essentials for the Psychologist

The background of information needed by the clinical psychologist who sets out to diagnose brain injury in the *individual* patient differs greatly from that which might be considered essential for the experimental psychologist who proceeds to discover differences in performance between *groups* of brain injured patients as compared with groups of other types of patients or of normal individuals. For the latter the emphasis is upon a standard, unvarying administration of the testing instrument, knowledge of adequate experimental design, and the application of correct statistical procedures. The matter of diagnosis is for the most part left to the medical members of

the team, the medical diagnosis being used as the criterion against which the testing instrument is validated. For a good discussion of the problems involved in the experimental approach, the work of Lynn, Levine, and Hewson can be referred to [45].

For the individual, clinical approach, somewhat different kinds of information are essential both to the making of a judgment regarding the performance of a patient and to the successful maintenance of the very different relationship the psychologist has with the medical members of the team. In the clinic the psychologist may not be called in to give aid in making a differential diagnosis unless the neurologist himself has difficulty in establishing a definite diagnosis. Few clinics or hospitals are so well equipped with psychological services that all cases can be referred routinely, and usually the psychologist is called in only if the neurologist is in need of more information in order to establish a diagnosis or if he feels that psychogenic factors may be complicating the problem or may account entirely for the symptoms. Neurologists vary greatly in their understanding of what the psychologist can offer in the way of help, and this is at least partly due to the great variability in the degree and kind of help psychologists have been able to furnish in the past.

Since, for the most part, psychogenic disturbances in the neurological patient are a matter of degree rather than of presence or absence, the psychologist cannot evaluate their significance to the individual patient unless he has a good understanding of the neurological as well as the psychological problem and what both represent to the patient. Therefore, he needs grounding in neuroanatomy and in clinical neurology in addition to his understanding of psychiatric problems and the application of psychological procedures. A brief outline of what should be regarded as an essential background for the psychologist who attempts to work with the brain injured patient is as follows:

1. A fairly good knowledge of neuroanatomy and the significance of various brain structures, augmented if possible by some observation of the dissection of normal and damaged human brains in order to get a realistic, concrete picture of the way

lesions actually may appear (diversity of location, variations in extent, etc.).

2. Some knowledge of clinical neurology, including particularly the main procedures of the neurological examination (examination for reflex and sensory disturbances, etc.).
3. Some knowledge of the purpose and meaning of the findings of the leading laboratory, electrical, and surgical diagnostic procedures (spinal fluid examination, electroencephalogram, pneumoencephalogram, arteriogram, etc.).
4. Some knowledge of the leading theories that have been offered regarding brain functioning.
5. Some knowledge of what has been learned from experimental production of brain lesions.
6. Fairly extensive knowledge of what leading neurologists have to say about symptoms, behavior, and personality changes of the brain injured, including the study of many case histories in which behavior of individual patients is described.
7. A general knowledge of the use that has been made to date of tests in the diagnosis of cerebral damage.

Only the last four points will be treated formally in this chapter. The groundwork in clinical neurology and neuroanatomy can be obtained from textbooks and in the clinic or hospital by attendance at neurological rounds and conferences. Friendly relations and cooperation between psychologist and neurologist are encouraged when the neurologist is asked to help in supplying the necessary background for the psychology trainee. In return, the psychologist can teach the neurologist something of his own procedures. Through the process of mutual education, psychologist and neurologist are able to realize better the supplementary value and limitations of the contribution each makes to the understanding of the patient. A recent paper by a neurologist and a psychologist setting forth the advantages of such teamwork is that of Hoedemaker and Murray [31]. These writers claim that in a study of 16 cases, between 75 and 87.5 per cent were correctly diagnosed by means of neurological and electroencephalographic examination and 93.7 per cent were correctly

diagnosed by use of a psychological test battery, while a combination of all procedures yielded an accuracy of 100 per cent. The criterion in this case was the final clinical opinion, made following thorough study and observation of the patient. The diagnostic opinions based upon the separate procedures were given prior to this.

Theories Regarding Brain Functioning

This exceedingly broad topic will be treated here only in summary fashion. From time to time, reference will be made to appropriate supplementary literature.

In general, we find discussion of two types of theory: psychological theories of the nature of intelligence, and neurological or physiological theories of brain functioning. The former are not necessarily concerned with the underlying neurological correlates of the intellectual functions; and, in fact, some psychologists feel that it is better that the psychologist deal only with the intellectual processes that can be measured in various ways (intelligence and aptitude tests or psychophysical methods, and the like) and leave the question of underlying anatomical structures and the physiological or biochemical processes to others. On the other hand, neurological theories also can be narrow, confining themselves to the manner in which nerve conduction takes place, without considering which specific intellectual processes are conducted. Although it is possible thus to engage in theoretical consideration of psychological and physiological functioning separately, the most interesting literature for our purposes is that which attempts an integration between the psychological and the neurological or physiological.

Numerous sources are available to which the student can refer in order to study the theories and hypotheses offered by various psychologists, psychiatrists, and neurologists. One of the briefer and yet fairly comprehensive summaries of the historical background for the present state of our knowledge is that offered by Halstead [22, pages 3-29]. He treats intelligence under three headings: "psychometric intelligence," "clinical intelligence," and "neurological con-

ceptions of intelligence." The first concerns the various "factor" theories, with the measuring of intelligence as the chief concern. Clinical intelligence, Halstead feels, concerns adaptation; writing in 1947, he feels this is mainly the concern of psychiatrists and psychoanalysts, who think of intelligence as an attribute of personality. Halstead feels that such a view is the result of observation of pathological forms of behavior. With the rise of clinical psychology in the years following the preparation of his manuscript, Halstead doubtless would feel that at least some psychologists are as concerned with adaptation and personality as are psychiatrists and psychoanalysts. However, his observation is of importance for us, since it emphasizes the difference in point of view between the clinical psychologist and what Halstead calls the "professional psychologist" of school and laboratory. Neurological theories, as treated by Halstead, are concerned with the controversy between "mass action" of the cortex and localization of functions.

For one of the latest neurological theories of brain functioning, see Hebb [28]. Leeper's excellent review [43] of Hebb's book is a critical attempt to integrate current psychological theories of learning and intelligence with Hebb's viewpoint, and the student can learn much from studying this review. Hebb thinks of perception, learning, motivation, and the like, in terms of neural processes. Leeper feels that Hebb's formulation and stimulus-response theories of learning are incompatible; and, although Hebb's conception of neural functioning is molecular, his theory of how learning takes place has more in common with "expectancy" theories. From the standpoint of adaptation this controversy between learning theories is of utmost importance, and the clinical psychologist needs to be concerned with conceptions of brain functioning which contribute to their understanding.

No man has contributed more to the understanding of the adaptation of the brain-injured patient than Kurt Goldstein [14, 15, 16]. His "organismic" theory is based upon observation of changes in behavior produced by destruction of cerebral tissue, and is thus derived from pathological rather than normal behavior. He describes a "de-differentiation" of behavior from more complex (normal) to simpler

(abnormal) processes. This is the basis for his well-known contribution of "concrete" and "abstract" behavior in the study of brain damage. Unlike many neurologists, Goldstein is also one of the most sensitive of clinical psychologists, and probably the extreme practicality and usefulness of his contributions to clinical psychology in the form of tests and suggestions for qualitative appraisal of the patient's performance stem from the breadth of his neurological and psychiatric knowledge which augments his judgment as a clinical psychologist. Goldstein does not share the preoccupation with quantification of Halstead's "professional psychologist." On the contrary, he refuses to publish quantitative results for his tests and stresses the importance of observing how the patient goes about getting the result rather than its quantity. To date, no psychologist can rightly claim that Goldstein is not correct in taking this stand.

Bender and Teuber [5] feel that their studies support a "field" theory of cortical functioning but that all the facts cannot be accounted for under a field theory. Lashley, Chow, and Semmes [42] have recently through an ingenious device examined Köhler's electrical field theory of cerebral integration; they do not find the theory supported, at least by their technique.

The problem of anatomical localization of function in the brain probably creates more interest than any other in clinical psychology and neurology. To the neurologist, it is of extreme importance in making a diagnosis; and to the neurosurgeon who is required to reach an operable lesion by the most direct route, localization is practically essential. Therefore, to the psychologist who studies a case for diagnosis, localization becomes of major importance. Localization can be accomplished by purely physiological, mechanical, or surgical processes (neurological examination, X ray, pneumoencephalogram, and so on) or it at least can be attempted through postulating the locus of the damage via an analysis of intellectual or perceptual deficits as revealed by psychological tests. Although our ability thus to localize brain lesions is still very limited, some progress is being made. According to Teuber [60] localization gets increasingly difficult as we proceed from the visual cortex forward. However, this may be to some degree a function of the tests Teuber

and others have selected in making their studies—a point that will be discussed later.

In beginning the attempt at localization of function via psychological tests, psychologists depend upon certain knowledge acquired from neurology. For example, we know that the brain has rather well-defined motor and sensory areas and that there are intervening areas called association areas. We know there is some cerebral localization of vision, hearing, smelling, and speech. We also believe that in right-handed individuals the left side of the brain, particularly as far as speech is concerned, is the most important side [46]. Many experimentalists believe that the frontal cortex is particularly concerned with emotional reactions and judgment. Some believe that the frontal cortex is also the most important seat of "higher mental processes" (whatever these may be). Beyond these more common beliefs, localization of "areas" runs from Brodmann's 53 areas for the entire cortex to over 200 on the superior surface of the temporal lobe alone, claimed by Vogt and his fellow workers. (For more details on localization see Chapman, Livingston, Livingston, and Sweet [13], Halstead [22], Harlow [25] and the excellent discussions following his paper, Lashley [39, 41], and Nielsen's well illustrated chapter [47].)

As localization by means of psychological tests now stands, we have the following: With the right equipment [5, 6, 22, 60] the presence of lesions in the parieto-occipital area can be determined definitely, but the exact locus of the lesion cannot be pin-pointed. Proper evaluation of aphasic disorders [46] will localize the lesion in the speech area fairly well but will not tell us what additional brain damage may be present, and we can only infer how much other damage is present from the behavior of the patient. Certain evidences of emotional disturbance combined with other signs to be discussed later, particularly as revealed by the Rorschach, can with reasonable safety be considered to be evidence of involvement of the frontal cortex; however, these signs will not necessarily mean that only the frontal cortex and no other part of the brain is involved. Teuber [25, pages 259-262] feels that we have not got beyond making divisions of the brain any finer than three gross categories: the parieto-occi-

tal, the frontal, and the intermediate regions. He feels we are still talking of "symptoms" and that these are what we are localizing rather than "functions." He says, "In most instances, we are merely trying to show failures on specific tests, not knowing of course what functions we are testing." [25, page 260] Teuber feels that we do not know what portions of the brain to destroy in order to isolate specific functions when we work on animals. Changes in test procedure lead to changes in classification of cerebral functions, and we have not been able to set up tests about which we can say with confidence that patients with one type of lesion always will fail and patients with another type of lesion always will succeed; in other words, failure is not an all or none process. These findings bring us back to Goldstein's stress on the necessity to observe the method the patient employs as he tries to solve a problem rather than simply whether or not he succeeds or fails.

In considering this limited picture, we need to keep in mind that several factors are necessarily hindering us: We cannot generalize about human beings from animal experiments, since the cortex differs in certain significant ways and since man exhibits certain differences in behavior. Also, in human beings brain lesions rarely occur in discrete areas which conform to formal neural structure.

The only large number of cases we have with lesions in a fairly specific area are the lobectomized psychiatric patients. In the case of lobotomy or leucotomy, the exact location of the lesion in respect to brain structure is far more difficult to determine prior to post mortem examination, due to great variations in shape of the individual brain. The lobotomized or lobectomized patient frequently shows postoperative improvement in intellectual functioning and emotional behavior; but in creating this change we can hardly say we have demonstrated that the only function of the frontal lobes is to produce a neurosis or a psychosis, although such a conclusion could follow from the logic of the situation if we should lose track of the important fact that we did not have a normal individual to begin with. There is also the question of whether the individual who has been lobotomized for intractable pain should be regarded as "normal" prior to the operation.

The best psychological study of the lobotomized patient which has come to the attention of the writer is that of Petrie [49], who reports the effects of four different types of leucotomy on patients, all of whom were neurotic rather than psychotic. Petrie feels that due to the better intellectual and personality preservation of the neurotic patient, resulting in better test cooperation, the information obtained can be regarded as more reliable than that obtained from studies of lobotomized psychotics.

Hebb comments: "The theory that all parts of the cortex contribute equally to problem-solving may mean that all problem-solving contains so many diverse elements that on the average all parts of the brain contribute to total performance equally." [25, page 256] He feels that the cortico-diencephalic system may undergo "profound and irreversible changes" as the result of sensory experience. With this as a possibility, we also have to consider the question of whether certain "functions" might localize differently in different human beings, depending on how and when they get their experience. The possibility that a function may shift its neural locus is given support by the fact that the language function can be restored in the aphasic patient through retraining. However, in this case the assumption is that the same neural structure on the opposite side takes over the function [47]; and, as far as this writer knows, no one has attempted to demonstrate that any area not designated a "speech area" according to present day localization of brain functioning can assume the task of language formulation.

In closing the topic of cerebral localization, two additional unanswered questions should be mentioned.* The first is the hypothesis that the primary germ layers, or cytoarchitectural structures, of the cortex play a role in determining locus of function. Chapman *et al.* [13] have claimed to have shown justification for such a hypothesis in respect to respiration and blood pressure. Lashley [39] claimed that when he destroyed brain tissue in rats trained in running a

* The special problem of localization of brain lesion and change of personality in psychomotor epilepsy is so complicated that effective treatment would not be within the scope of this paper. For a discussion of the difficulties involved and the state of knowledge at a recent date, see B. Milner, "Intellectual Functions of the Temporal Lobes," *Psych. Bull.*, 1954, 51, 42-62.

maze the disturbance in habit was in proportion to the amount of tissue removed regardless of layer. However, in learning, animals perhaps rely more than man does on paleocortical functions, such as smell; thus we should be cautious in generalizing from rat to man on this point.

The second question concerns how, in the case of disturbance in a specific ability or activity, we can demonstrate by means of psychological tests whether the lesion is in the gray matter of the cortex or is subcortical. Presumably, a subcortical lesion involving the conduction pathways from a certain area of the cortex to the periphery could produce the same behavioral deficit as a lesion in the cortex itself. If a one-to-one relationship should exist between cortex, connections with periphery, and behavior, no detectable difference in test performance should appear, regardless of location of the lesion. However, the conduction system of the cerebrum is too complex a network of pathways and the occurrence of lesions is rarely sufficiently discrete for any such one-to-one relationship to be easily demonstrable at the behavioral level.

A good example of the difficulty this problem of cortical versus subcortical localization presents in differential diagnosis is the similarity of personality changes that can be produced by lesions in certain areas of the frontal cortex, the mesencephalon, or the cerebellum. Presumably, this is because the frontal lobes and cerebellum are connected by pathways travelling via the mesencephalon.

In summing up this section on theory, it can be seen that the trend at the present time appears to be toward a fusion of interest in both the intellectual and physiological approaches by psychologists, neurologists, and psychiatrists. The biochemist also joins the team with his contribution of studies of chemical changes in normal and abnormal functioning. Sometimes it is only by making use of the contribution of all the members of this team that an adequate diagnosis can be made. For example, a patient in the medical service of a hospital was referred recently for psychological testing because of what appeared to be psychotic behavior. His Rorschach was characteristic of psychosis such as is found in cases of brain damage or toxic states. Upon inquiry regarding the possibility of a toxic condition, it was

found that the patient was suffering from a serious liver disease, and it was possible to make the assumption that the condition producing the organic psychosis was a reduced supply of glycogen to the brain resulting from malfunctioning of the liver. Studies of the importance of glycogen in normal brain functioning had a large share in this case in making the psychological test findings intelligible.

Numerous cases could be quoted in addition to the above to illustrate the importance of understanding the total picture. It may be possible when experimenting with the so-called normal individual, particularly if this is done on a group basis, to disregard the underlying physiological state; but for the psychologist to do so in clinical psychological diagnosis of the individual patient is to invite error that may result in serious mismanagement of the patient. Correct treatment hinges upon correct diagnosis. For further discussion on this point see Bruetsch [11, pages 324-326].

Finally, it probably is appropriate to advise the clinical psychology student that it is more important for him to know that a variety of theories regarding brain functioning exist than it is for him to have a thorough understanding of each of the theories. It is probably detrimental for him to subscribe to any one theory at this state of our knowledge, for if he does so he may seriously limit his observational scope by failing to take as many alternatives as possible into consideration. Since the application of psychological tests to the diagnosis and understanding of brain damage is still in the investigative and experimental state, the more open-minded the clinical observer is, the better. However, some knowledge of the existing theories can stimulate the interest of the observer, help him set up hypotheses to test, and perhaps increase his sensitivity in observing the events that take place during test administration and in evaluating the data.

Physiological and Mechanical Considerations in Brain Damage

If a bullet or other foreign object penetrates the skull and enters the brain, it is possible for us to trace its course at autopsy; or if the object remains in the brain and the patient lives we can easily locate it by means of X ray. Of course the position of the object as viewed in the X ray does not locate all the damage, since damage occurs along its entire course to where it finally lodges. How much damage it leaves behind will depend upon the hardness and shape of the object, upon its speed, and upon the degree of freedom of the head to move at the time of impact, injury being greater when the head is fixed [21].

In cases of lesions due to vascular accidents, definite necrotic areas are observable at autopsy. The effects of deficiencies in blood supply to surrounding areas which may not become actually necrotic are harder to estimate. Of course the same considerations hold true for lesions, both pre- and postoperative, due to tumors, and the like.

When we come to the consideration of physical damage due to degenerative diseases such as Pick's disease or multiple sclerosis, it is much harder to keep track of the individual lesion (and, likewise, the psychological picture is usually that of a more profuse disturbance). However, most of these effects are observable microscopically, or, at least, enough is observable to convince the investigator that a lesion is present. Most of the time microscopic examination is unnecessary to establish the presence of a lesion.

In the case of closed head injuries, such as concussion, however, the case is different. No lesion may be observable microscopically and the EEG may be entirely normal, and yet the patient may exhibit post-traumatic symptomatology. Probably the diagnostic confusion caused by the multiplicity of symptoms in such cases and the frequent absence of positive findings on neurological examination have inspired much of the experimental work on head injury. These studies have contributed much to the present belief that there is a

physiological basis for the symptoms of the postconcussion syndrome. It has been found that the metabolic and biochemical balance of the brain is upset following injury [35, 58]. Gurdjian and Webster [21] demonstrated that not all cases that showed nervous dysfunction had microscopic lesions. They showed that recoil of the brain against the irregular bony structure of the skull causes laceration, and the brain can be damaged by differences in density and texture of its own internal structure; for example, if the head is jared sufficiently for the cerebrum to shift, the free edge of the tentorium cerebelli can bruise or cut the brain stem.

Rand [52] has demonstrated that scar formation in closed head injury differs, to the disadvantage of the patient, from scar formation following removal of damaged tissue through surgery. Damaged tissue that is not removed is regarded as productive of pathology in addition to the original lesion. Strauss and Savitsky [59] list over thirty mechanical and physical results of closed head injury, all of which could occur in a single case. The intracranial disturbances they list which can be present in addition to the other changes are softenings, hemorrhages, scar tissue, atrophy, dilation of the ventricles, excessive fluid over the brain, and meningeal adhesions. Many of the symptoms are reversible, but even then they may persist for years.

In this brief and by no means complete review of some of the findings, particularly in regard to closed head injury, it is intended to impress the student with the fact that varied and serious damage can result from blows or jars to the head and that this damage does not need to be easily demonstrable in order for pathology to be present. Psychological tests often detect these cases better than neurological examinations and other procedures, and positive psychological test results should be regarded seriously even though all other tests may be negative [37, 45].

Psychogenic Symptoms and Personality Change in the Brain Injured

The space that can be allowed here for this fascinating topic is insufficient for more than reference to different points of view and to some of the literature. Some of the most valuable literature for the psychologist concerns closed head injury, the symptoms of which have baffled the neurologist, psychiatrist, and psychologist alike because they so frequently overlap with symptoms of psychoneurosis and neurasthenia.

Grinker and Weinberg [20] give a list of symptoms of the post concussion syndrome which they feel may be classed as not purely neurotic. These are: headaches, worsened by postural changes; dizziness, which may be largely organic at first and leads to so much anxiety that it becomes the stimulus for neurotic symptoms; weakness; tinnitus; decreased hearing; faulty ocular convergence; difficulty in concentration; sleeplessness; and vasomotor instability. It can readily be seen that with such an array of symptoms it is going to be difficult to tell where the organic trauma leaves off and the neurosis begins in the individual patient.

One of the best papers is that of Strauss and Savitsky [59]. Although this paper was written (1934) before some of our newer diagnostic techniques were perfected, the writers' sensitive, thoughtful consideration of the total problem faced by the brain injured patient makes it worth continued study. They present some excellent case material, with stress on the atypical case which is so easily misjudged. These writers feel that clinically we can and should distinguish the organic sequelae from the reaction of anxiety and terror that follows a threat to the integrity of the individual, and that is the "traumatic neurosis." They regard the postconcussion syndrome as "organic and dependent upon a disturbance in intracranial equilibrium due directly to the blow on the head." [59, page 954] This is manifested by headache, dizziness, inordinate fatigue on effort, intolerance to intoxicants, and vasomotor instability. Negative

results on neurologic examination and a normal status are not considered final indications of absence of brain damage. In evaluating doubtful cases, they believe in a "coöperative investigation" that includes the services of the clinical psychologist. They believe that significant brain injury can occur without loss of consciousness. They suggest that psychogenic factors will always complicate the picture if socio-economic and other difficulties following the trauma last long enough, and they feel that the premorbid personality makeup will determine the way in which the patient will handle his problems. Of use to the psychologist as well as the neurologist is the advice that "observations should be recorded regardless of the examiner's opinion of their significance at the time of examination," and the comment that "failure to understand a clinical phenomenon is no proof of its psychogenicity." [59, page 955] To drive this point home, they observe that doctors who have suffered concussion themselves are much less inclined to regard the symptoms as psychogenic.

For a psychoanalytically oriented point of view, see Schilder [57]. He states that hysteria is the neurosis that most frequently follows head trauma and goes on to say that the past and present of the individual determine the choice of neurosis. Apparently he feels that people predisposed to hysteria are more likely to get head injuries, for he puts stress on the premorbid personality and suggests that a very dependent individual may expose himself more to accident and that hysterical symptoms are the natural outcome of such a personality. That the dependent individual might seek shelter and therefore expose himself less is not offered as an alternate hypothesis.

In his discussion of the psychology of neuroses following head injuries, Schilder mentions the following points: threat to the integrity of the body as the basic trauma; acknowledgment of a superior force, possibly resulting in masochistic gratification to certain individuals; unconsciousness and disturbance in brain functioning, the process of reorientation of the body and the outside world, reliving the terrors of annihilation through dreams, etc. (repetition compulsion); fears of lasting defects (these may transfer to the sexual sphere—Freud spoke of castration anxiety in these cases); hypochondriacal and neurasthenic symptoms (more likely to occur

when the body image is changed); difficulties with memory, leading to fears of impaired intellect; hysterical symptoms (more frequent when previous deprivations of love have occurred); and feelings of social injustice, which lead to so-called "compensation neurosis."

Bychowski's [12] view is also analytically oriented. He feels that the dimension of the personality most affected is the ego. The patient suffers from altered body image, feelings of weakness and inability to defend himself, and his channels of communication may be altered (aphasia, memory loss, hearing loss, etc.). The symptoms are regarded as measures undertaken by the ego to cope with the situation, some of which are: dreams; repetition compulsion (patient complains repeatedly of his injury); affective torpor (due to poor memory); general blocking and autistic withdrawal (for self-protection); projection of patient's own aggressive drives and weakened id impulses onto the environment; disintegration and projection of the super-ego (feels others considers him lazy when he withdraws); reactive super-ego (patient drives himself, due to feelings of inadequacy); and sexual impotence (so much effort is required to maintain unity of personality that energy is transferred elsewhere).

In their study of pre- and post-traumatic personality in head injury, Ruesch, Harris, and Bowman [55] used psychological tests and came to the conclusion that the pre-traumatic personality had more bearing on the post-traumatic behavior of the patient than circumstances related to the injury. They found that a severe injury may have the same effect as shock therapy or lobotomy in reducing anxiety and worry, while mild trauma may reinforce existing personality difficulties such as irritability and emotional instability.

Bowman and Blau [10] and Wittenborn [63] describe psychotic states following head injury. The latter found that organic diagnostic groups did not show homogeneity of psychotic symptoms.

For detailed descriptions of patient behavior in all manner of situations see Hanfmann, Rickers-Ovsiankina, and Goldstein [23], for a thorough study of a single case, and Goldstein [16]. The latter describes performance on many psychological and psychophysical tests. Goldstein warns that brain injury must not be regarded as a

single diagnostic entity and that while brain damaged patients have something in common, they differ too much for it to be possible to make general statistical evaluations of their capacities. He states that similar lesions will not even cause equal damage to the capacities of different individuals.

Because of the frequency of subdural hematoma, the article by Wortis, Herman, and London [64] on mental changes in these cases is included here. They state that the most striking neuropsychiatric finding is the mental disturbance, and progression of the neuropsychiatric signs is the most important feature. Psychological tests showed that the chief defects were impairment in abstract thinking with relatively good preservation of concrete thinking, striking reduction in spontaneous ideation, disturbances in perception of Gestalten, and alterations in mood. They call attention to the frequency of alcoholism, which contributes to falls and accidents due to poor coördination and diminished perceptual acuity in the intoxicated individual.

For one man's viewpoint on personality factors in multiple sclerosis, see Langworthy [38]. He emphasizes the emotional immaturity of these patients, particularly in sexual adjustment, and the frequency of the diagnosis of hysteria in the early stages due to personality structure consistent with hysteria and to the bizarre complaints. He offers the hypothesis that personality problems are factors in the development of changes in the central nervous system; he suggests a psychosomatic basis and recommends psychotherapy. He mentions that in psychotherapy the patients relate to the therapist in a passive, childish manner and develop verbal insight without showing emotional change. The present writer would like to comment that the same could be said of the great majority of the brain damaged patients she has observed in psychotherapy. While the Rorschachs of multiple sclerosis patients are frequently of a quality consistent with hysteria, the performances on the Wechsler-Bellevue frequently are not (the discrepancy between the two tests being a good diagnostic clue). The good preservation of intellectual functioning, particularly in early cases, is consistent with Langworthy's observation of better intellectual insight in psychotherapy.

As an alternate hypothesis to Langworthy's on the role of emotional factors, it can be suggested that changes including regression to childish and emotionally unstable or dependent behavior might be predicted to result from the disease, since one of the main pathological findings is demyelination, the reverse process (myelination) being a maturational one. Certain kinds of encephalomyelitis are also characterized by demyelination, and emotionally unstable and childish behavior is particularly common in encephalitis. Langworthy had premorbid histories of his patients to back up his impression. However, examples of "immature" behavior and sexual difficulties are so prevalent in the case histories of all kinds of patients that it seems we should look for less general factors. Carefully controlled psychological studies of multiple sclerosis are very much needed.

A reference the student will enjoy is Rylander's report [56] on sixteen patients having resections of the parietal, temporal, and occipital lobes because of brain tumor. (Unlike many of the Rylander references, this one is in English.) In evaluating the very slight behavioral changes in these patients, we should keep in mind the fact that they led very simple village lives, as is partly evidenced by the fact that Rylander traveled by bicycle to visit and test them in their homes. Under these circumstances, he obtained excellent case history material, which he reports sensitively and charmingly. These patients showed only a very few of the psychic changes observed in thirty-two patients operated on for injuries in the frontal lobes (1939 study). The latter showed an exacerbation of the basic premorbid personality makeup (such as cycloid, schizoid) together with tactlessness, lack of consideration for others, restlessness, and emotional lability. Of the intellectual functions, capacity for combination, abstract thinking, and judgment were impaired, but memory, attention, and the more automatic mental functions deteriorated little, if any. Vegetative phenomena such as youthfulness, decrease in fatigability, and enormous appetite occurred. There were variations depending on the amount of frontal tissue excised. Symptoms in the temporal-parietal-occipital group included a mild degree of emotional instability, slight increase in fatigability, moderate reduction

in power of concentration, and slight memory impairment (the latter three not being statistically significant). Rylander concludes that the undesirable symptoms in the frontal group are due to frontal lobectomy.

This brief review of the foregoing references should serve as a background for the final consideration of this chapter, which is how it may be possible to interpret psychological test results obtained from a large variety of patients in such a manner as to distinguish the brain injured from the normal, the various psychoneuroses and psychoses, the psychosomatic, and so on. The brain injured will be more variable in basic personality than any other group except perhaps the normal, since for the most part he will be the normal individual who has sustained a head injury. However, the neuroses, psychoses, psychosomatics, and other groups also sustain head injuries at times; and when we get these more complicated cases we are required to determine, if we can, which symptoms are premorbid and which are due to the injury. Many times we can take a tip from Rylander and others and state that the premorbid symptoms are simply exacerbated, but we must not lose sight of the fact that many symptoms commonly classed as neurotic which follow brain injury are considered to be due directly to the injury.

Psychological Testing for Diagnosis of Brain Damage

A Rationale

Anyone reading this far, and with increasing annoyance at finding no information regarding test "signs" for brain damage, should perhaps be reassured that much of what has been covered is going to be incorporated in the rationale for the use of test findings, which follows. And anyone skipping the foregoing sections and turning directly to this section in the hope of quickly picking up a few test signs that will lead to a magical diagnosis of brain damage probably will find the rationale less meaningful and useful.

The material covered so far furnishes the concrete, realistic background from which to begin the analysis of the psychological

test productions of the brain injured. If we had started with the test signs and indicators claimed by the various experimentalists who have investigated this problem, the important factor of what sort of a patient we are dealing with would be missing. As Goldstein has pointed out, the brain injured patient is not a single diagnostic entity to begin with. Up to this point, at least we have found that we need to be prepared for practically anything in the way of basic personality and symptoms. But we have learned a good deal more than that, as we will see as we go along, and we should be able to set up some hypotheses and predictions to guide us in what to look for. Before we do this, however, it might be best to consider the sort of patient who will be likely to be referred to us in a clinic or hospital setting.

Neurologists usually do not refer a case to the psychologist unless they have some question about the diagnosis; on the other hand, they may be sure of the neurological diagnosis but feel that the case is complicated by psychogenic factors unwarranted by the neurological damage. Or they may feel quite certain that no neurological damage exists and that the problem is entirely psychogenic and wish to have support for this impression. The psychiatrist may refer a case where he feels relatively secure about the psychiatric part of the diagnosis but suspects that some brain damage may be present in addition. Or the case may come from one of the medical services; for example, a case with a long history of gastric ulcer who returns to the hospital with exacerbation of stomach symptoms may develop psychotic behavior and be found on testing to show signs of brain damage, from which it is possible to postulate that the difficulty may be due to cerebral metastases from a cancer in the stomach (the presence of cancer having been determined meanwhile).

Such a selection of cases differs in an important manner from that necessary for research purposes, for which the cases have to be clearly diagnosable by the neurologist in order to make up a suitable population upon which to base statistical determinations. Because of this difference in populations we would be justified in expecting some differences in psychological test results; but we probably would expect differences in degree more than differences in kind, and, in gen-

eral, this is what we find. However, we must bear in mind that the life situation of the patient who has a disorder that is difficult to diagnose or is just beginning is quite different from that of the patient who has a long-standing disorder (to which he may or may not have adjusted) or from that of the patient who is sure of what ails him, whether he adjusts to it or not. Of course not all patients with brain damage, even though severe and of long-standing, know what is the matter with them.

In setting up predictions for what we might find in the test material of the patient we have just been describing, and in generalizing from what we have noted in preceding sections, we would feel justified in looking for the following:

1. Basic personality should show, but it will be necessary to keep in mind that some aspects will be intensified and these will be particularly the defensive aspects (the ego is the region most disturbed, and defenses are ego functions) [12]. The basically compulsive individual will appear more constricted and compulsive, and a basically cycloid individual may appear alternately more depressed or more excited [56].
2. Signs of disturbance in the body image will be likely [12, 57, 59], and we can look for these in the drawings of human figures and in the way human beings are projected onto the Rorschach ink blots.
3. Signs of insecurity probably will appear and may be revealed by the expression of the patient's own feelings of weakness, uncertainty and inadequacy [12, 20, 57, 59] in his dealings with the test material.
4. Disturbances in memory are likely to be present; this is a symptom agreed on by everyone.
5. Other sensory disturbances (hearing, vision, color vision, the aphasia's and the like) may show on appropriate tests.
6. There may be either a tendency to perseverate, or perseveration may be clearly present and dominate the performance (repetition compulsion) [12, 57].
7. Concrete behavior [16] is described by nearly everyone, so we

should look for disturbances in abstract capacity in all cases. This may represent a regression to a simpler, surer way of dealing with the environment. If abstraction has been given up for a sensible, practical concreteness, the lesion may not be in the frontal lobe; but if the concretization is contaminated by faulty judgment, a frontal lesion can be suspected.

8. Regressive signs can be expected to appear in previously well-adjusted individuals having severe damage or in individuals having made borderline adjustments who have very mild damage, due to inability to maintain any longer a mature level of functioning.
9. Test evidences of projection of unacceptable impulses onto the environment [12] may appear with any patient who is on the verge of regressing. In the psychotic states, projection might be an important symptom.
10. Some patients should show an unusual effort to be coöperative (projection of the super-ego) [12], manifested by few rejections, longer testing time, thorough answers, attempts to improve replies, and the like.
11. On the other hand, some patients will show signs of hostility and uncoöperativeness, if they feel they have not been compensated adequately for the injury [57], manifested by rejections, reversing Rorschach cards, short replies, hostile comments about the referral of their case to a psychologist, and so on.
12. Some patients will show signs of hypochondriacal and neurasthenic symptoms, which need not necessarily be basic in the personality [20, 59].
13. Other more direct anxiety indicators are likely to appear, especially when the trauma is mild. Such signs may drop out altogether if the trauma is severe and produces the effect of lobotomy [55].
14. Likewise, other signs of insecurity may drop out when damage is severe, and this can give us a differential indicator for degree of damage. We will need, then, to take care that we do not

decide that the absence of one or two reliable signs, which hold for many cases, indicates that no brain damage is present in a particular individual. In the absence of these signs, he may have even more damage than the patients for whom they hold good. (He probably will have other signs, however.)

15. Complaints of being tired or signs of fatigue without complaint may appear, and they will be less common in the frontal lobe cases [56]. Fatigue can be manifested by worsening of speech difficulties, poorer memory and concentration, responses becoming vague, fragmented, and so on.
16. Disturbances in perception of Gestalten may or may not be present [22, 25].
17. Education and cultural and socio-economic level [59] will have to be taken into account in interpreting the data.
18. Responses showing fears of sexual impotence [12] or of incontinence may appear. For the latter, we might look for anal or water responses on the Rorschach.
19. It will not be practical for localization to be the main consideration in the beginning (see section on theory, pages 324-331), the presence or absence of damage being the first problem. It may not be possible to localize the lesion at all; and trying to establish a locus is a refinement of analysis which can be attempted after all the results are in, including the neurological findings as well, in many cases.
20. If the patient shows signs of crudeness and poor judgment and no further signs of generalized disturbance (such as visual-motor signs) we can postulate a frontal lesion [56].
21. If the patient shows signs of visual disturbance without motor disturbance and without evidences of crudeness and poor judgment, we can postulate a parieto-occipital lesion [25, 56].
22. If the patient shows signs of both visual and motor disturbance, the lesion or lesions may involve the cortex extensively or may be subcortical.
23. If speech is disturbed and motor performances such as block designs and copying Gestalten are well executed, we can suspect

- a parieto-temporal lesion and send the patient to a speech pathologist for further refinement of the psychological diagnosis [22, 25, 46, 56].
24. If relatives declare that no change in personality has taken place, we will not postulate a frontal lesion of any very great size from test findings which indicate that brain damage is present but which give insufficient clues as to the locus [56].
 25. When a strongly hysterical reaction is present in some but not all of the test material we can regard it simply as a sign that brain damage may be present also [57], or we can suspect multiple sclerosis [38]. We certainly will not say that the presence of hysterical signs means that brain damage is absent and the patient is basically hysterical, and we will look for discrepancies between tests to make the differential diagnosis.
 26. We will be prepared for heterogeneity of test signs; we will not expect all patients having brain damage to show the same signs or any one patient to show all of the signs that can be regarded as useful for general diagnostic purposes.

While no pretense can be made that the twenty-six points outlined above have been derived entirely from material uncontaminated by psychological test findings—still it would have been possible to make the majority of these predictions without ever having seen a single test protocol of a brain damaged patient, simply by making a study of the physiological and psychological effects of the injury on the patient. Very little of the existing literature on differences between groups of brain damaged and other patients has been referred to in the setting up of these points. This is because much of the literature is concerned with "signs," which, while they stand for the same kinds of behavior we are talking about here, have become somewhat removed in our thinking from the concrete problem of just what the injury means to the individual patient. Often, the behavior of the patient has been abstracted into a sign to which a statistical frequency has been attached; and this may cause us to apply the sign somewhat blindly to all cases, leading to serious errors.

Anyone familiar with the literature on group differences will note

that so far we have not introduced anything very new to look for in a test protocol. Many of the existing signs will be readily recognized: for example, Point 3 is obviously the Impotence sign of Piotrowski [50] and partly covers Perplexity as well. It is to be hoped, however, that the reader will not use the material presented here purely for the abstracting of his own signs, but rather that he will use it without ever losing track of the individuality of each patient whom he attempts to evaluate. For example, a patient who grew up on a small farm in the heart of the dustbowl, suffering from severe economic deprivation throughout his childhood and early adulthood, might give only concrete responses to questions requiring verbal abstractions and yet have no brain damage at all. A patient with good intelligence but only a fourth grade education might do far better on performance tests than on verbal tests and still be undergoing organic deterioration. A patient reared in an environment that disposed him to the development of antisocial ideas may show signs of bad judgment, according to popular standards, and yet this will not necessarily mean he has frontal brain damage. The middle-aged gentleman who has imbibed moderate amounts of alcohol throughout each day for twenty years or so may have developed such good adjustive techniques because of a chronic slight tipsiness that, when permanent brain damage strikes from other causes, he experiences less disruption and anxiety than his more temperate neighbor, the previously learned adaptive behavior having come to his aid in his time of need. If he has only mild damage he may be difficult to spot, for evidences of insecurity and anxiety are among the best of the early signs [2].

It would be possible to go on for pages citing exceptions to the rules, and we might learn more from the so-called atypical case than from the less unusual example. If, however, we regard each case as an individual we cease to think of what is typical or atypical and readily learn to size up such factors as differences between verbal and performance scores in relation to the patient's education and life experience. For example, a bank clerk of bright-normal intelligence may show appreciable deterioration and still be able to work all the Wechsler arithmetic problems, whereas the deprived dustbowl farmer who

has recently acquired a brain lesion but who always has been very concrete in his thinking may be able to give the answers only to arithmetic problems requiring the making of change, and then he may give the answer in terms of change, such as "one dime, a nickel, and two pennies." He then may reveal impotence by being unable to change his answer to a total figure although he calls the examiner's attention to its poor quality, laughing embarrassedly at himself. His arithmetic performance then becomes a better diagnostic clue than his verbal abstraction performance or the difference between his verbal and performance scores.

Further analysis of the twenty-six points will reveal that more of them are concerned with the emotional reaction of the patient than with the intellectual reaction, although, of course, there is no absolute dichotomy between the two. Physiological reactions also play a role, and they may be revealed directly (fatigue, sweating, slurred speech, and the like) but often may be revealed by their effect on the emotional adjustment (hypochondriacal and neurasthenic signs, and the like) and on the intellectual capacity (changes in capacity to concentrate as the patient works, and so on). Since so many of the physiological reactions can be observed directly, the full and accurate recording of these is an essential part of the test protocol and often an invaluable aid to diagnosis. Sometimes the differential diagnosis rests upon the physiological reactions alone.

The Role of Emotions and Basic Personality

Since emotional factors play such an important role in our predictions, they deserve rather detailed consideration. How they are manifested will be dependent to a great extent upon the basic personality, and this means that we must expect many variations in behavior. We must anticipate considerable overlap in the way all kinds of patients will respond emotionally to various bodily diseases and injuries. For example, paraplegic patients with lesions only in the spinal cord or patients with amputations may show signs of disturbance in the body image just as the brain damaged patient does. One of the best signs of such a disturbance, regardless of diagnosis, is the rejection of the usual "human beings" on Card III of the Rorschach for the reason

that they could not be human figures because the usual "leg" area is separated from the rest of the body. The upper part of the "body" is often perceived as "birds" or "chickens," these being concepts that permit omitting the offending detached "leg." It may be easier for these patients to see human beings on Cards I, II, and VII than on Card III; or they may see no human beings at all; or they may see "torn" butterflies, "rotting" stumps, etc.

The writer finds that it is more difficult to determine whether the paraplegic patient may have mild brain damage than for most other patient groups and that general medical patients with a variety of physiological disorders present a more confusing picture than psychiatric patients who do not have a physiological disease. Psychosomatic patients, particularly those having duodenal or gastric ulcers, often show a number of the features frequently appearing in protocols of brain damaged patients, such as many ordinary whole responses on the Rorschach, exaggerated attempts to please the examiner, signs of bodily preoccupation, motor slowness because they readily give in to dependency needs when they are hospitalized and can justifiably regard themselves as ill, regressive emotional signs for the same reason. When the ulcer patient develops mild brain damage from some other cause, it may be easier to predict from his test productions that he has an ulcer than it is to decide whether he has brain damage.

The patient who presents the greatest diagnostic dilemma is the immature, basically hysterical patient of low intelligence and poor education who develops mild or moderate brain damage. It may be impossible to determine whether damage is present until it becomes so far advanced that the patient's perceptions and motor performance are grossly distorted. One reason for this is that the test cues we are accustomed to use for signs of emotional regression were present in the premorbid state. That is, the patient has always shown "regressive" signs, as judged by normal standards. Also, being poorly educated and narrow in his interests, his vocabulary and fund of information do not represent a good estimate of his innate intellectual level from which we might judge whether or not he has deteriorated. Probably having worked mostly with his hands, he will do relatively

better on performance tests; and he may not have to perform at his premorbid level in order still to do better than his verbal scores, which always would have been very low. Being infantile and of below average intelligence, his work adjustment always has been poor and may be only slightly worse than usual; likewise for his social adjustment. Always having complained in order to get attention, he always will have shown signs of bodily preoccupation.

In the case of the intelligent hysteric, presence of intracranial pathology is relatively easier to determine. Yet, since his interests often are narrow he also may not show very well-developed information and vocabulary scores. The diagnosis of mild damage gets easier as the educational and cultural level goes up, since heavy reliance needs to be placed on the differences between verbal and performance scores, emotional factors as revealed by the Rorschach being less definitive for differential diagnosis in these cases. Many times the psychiatric disorder must be treated before the extent of organic damage can be determined validly.

The functionally psychotic patient with very mild brain damage may show so much functional disturbance that it is impossible to determine by the usual indicators whether brain damage is present. Of course, with such cases treatment of the psychosis is of first importance. If this condition clears up tests can be readministered and a diagnosis of brain damage may be possible, particularly through analysis of differences appearing in the two sets of protocols. In cases where brain damage precipitates a psychotic reaction in a predisposed individual, the psychosis can have the features characteristic of a functional psychosis; and the presence of brain damage, if mild, may be postulated only from the historical sequence of events until the psychosis has cleared up. Such psychoses are often transient, and it may not be necessary to wait very long for the opportunity to retest and make a more accurate diagnosis. As soon as the psychotic symptoms disappear, such patients frequently become very critical of their own behavior during the psychosis; but they often do not show any real insight into the connection between the organic trauma and the psychosis.

In all the difficult cases described above, the psychologist will do best by simply stating that the picture is complicated and confused, recommending that the patient be closely watched for further developments, and refusing to commit himself to a specific diagnosis. Attempts by the medical profession to force a more definite stand should be resisted both for the welfare of the patient and the professional reputation of the psychologist. In connection with these cases, it might be well to recall Strauss' and Savitski's [59] warning not to disregard any of the data. Often organic signs may appear suggestively on only one test (frequently a drawing test, or perhaps the Rorschach may show one or two organic signs among a multitude of schizophrenic signs), and when this happens we should cite such test evidence as our justification for awaiting further developments.

The ego defense called projection has been listed above as one of the mechanisms employed by the brain injured patient. As he approaches psychosis, this defense becomes more conspicuous, and it accounts for the "paranoid" signs so frequently observed in the organic psychoses. The patient finds acknowledgment of the change within himself intolerable and he defends himself by projecting this change onto the environment. The environment is at fault, not he. The more essential it is to him that he be independent and adequate in all respects, the more likely he is to resort to such a defense. If he feels himself slipping in his ability to control his sexual and aggressive impulses, he may decide that man's moral standards are breaking down or that the world is in danger of destruction. (This will be readily recognized as a popular theme of the aging and senile.) For example, he may see the usual "bears" on Card II of the Rorschach, but he will call them "Russian bears" and in the inquiry state that the "bears" and the red on the card are indicative of the struggle of civilized man against primitive forces (response given by a patient with degeneration of the tips of the frontal lobes).

If the patient is more generally deteriorated, he may approach this ideation but be more helpless in expressing it. For example, a deteriorated patient said, "Russian bears," and in the inquiry responded, "They're in a fight." Asked why the bears were "Russian,"

he replied helplessly, "Well this figure reminded me of a bear. I said Russian because it refers to the Russian bear. All cartoons always represent the Russian bear."

In the above reply, the patient gives us a valuable clue to use in distinguishing the paranoid-type response of the brain injured patient from that of the paranoid schizophrenic: In general, the brain injured will stick closer to the popular idea ("all cartoons," and Russia as the aggressor, for example) and be less autistic in his choice of persecutor or delusion. In his perseverative way, he is far more inclined to pick up his ideas from whatever is conspicuous in the environment at the moment, whereas the schizophrenic is more likely to ignore the environment. For this reason, we feel more "in touch" with the organic psychotic than with the schizophrenic. For example, around the time of the 1952 Republican convention a brain injured patient responded to Card VII of the Rorschach with, "Well, this must be political—elephants' heads here. Two, three, four elephant heads and trunks." On inquiry, he said, "Well, the trunk up shows victory and the trunk down shows. . . ." (Patient was getting very tired.) "They look like the Republican elephant."

The use of locations on the Rorschach for the expression of popular or usual ideas can also be helpful in distinguishing the organic psychotic from the schizophrenic. The organic psychotic, if normal prior to injury, practically always selects the commonly used location in his projection of the usual or popular idea. This is because in the past he has been accustomed to thinking along normal lines and still is not very unusual in his thinking, although his judgment has become impaired. Generally he will reveal any bizarreness in ideation mostly in the inquiry; for, although his basic idea is normal enough, the judgment he applies in developing it may be faulty. The schizophrenic, on the other hand, may verbalize the popular concept but in locating it reveal that he has not seen it in the usual area of the blot. If he has used the popular area, he may not have seen the concept in the usual way. There may be nothing else bizarre about the response. This sort of performance is probably one manifestation of the disturbance in associational thinking that is so characteristic of the schizophrenic. Since psychotic brain injured patients practically

never perform in this way unless they were schizophrenic to begin with, when such behavior appears schizophrenia can be suspected. The brain injured patient may be unable to specify the location clearly, but he at least will point vaguely to the usual area. If he is deteriorated enough to be unable to specify, he generally will reveal plenty of other evidence to make the diagnosis clear.

The educational and socio-economic levels of the patient have as important effects upon his emotional adjustment to the injury as upon the diagnostician's use of intellectual indicators in such cases. For example, a short-order cook who had never done anything else reacted so strongly to an increasing memory impairment that he quit his job, refused to find another, denied anything was wrong with him, and gave a superficial impression of "passive dependency" or "psychopathic personality." A very intelligent patient who had a sixth-grade education but had reached a secure economic status as a machinist developed a depression and a psychosis when he became a hemiplegic. On the other hand, the versatile, well-educated patient may sustain considerable motor impairment without showing much personality change. But he may become markedly paranoid if his frontal lobes are involved and he is frequently confronted with errors he has made in judgment. A very intelligent Negro with good education who had invested all his money, hopes, and energy in improving his social status developed both an hysterical paralysis and a psychotic depression as the result of mild brain damage accompanied by convulsions, together with the psychic trauma of being unable to secure a job commensurate with his educational level.

The way all these patients are reacting to their injuries will be revealed better by projective tests, especially the Rorschach, than by what they have to say about their feelings. Piotrowski's impotence sign will be particularly conspicuous, especially if damage is not yet severe. Confrontation of the short-order cook (mentioned above) with the fact that the tests reveal he is worried about something may bring forth his whole story, much to his emotional relief and to the better ease with which the neurologists can advise and treat him and counsel his family. Nearly all brain damaged patients harbor secret fears of "insanity"; the judicious use of psychological tests to elicit

expression of these fears and to reassure the patient that the problem is an organic one is practically always justifiable, in this writer's opinion.

To support the view that the brain damaged patient is better off if he knows what is wrong with him there is the observation that organic psychotic patients frequently recover from psychotic behavior within the environment of the hospital where their disability is acknowledged and accepted. They may become psychotic again upon returning home to families who have not accepted emotionally the patient in his disabled state. The reverse also can be true. For example, a patient who cared deeply for an attractive wife (who had been somewhat promiscuous before marriage) became psychotic within the hospital, accusing the patient in the next bed of sleeping with his wife, but gave up his psychotic symptoms (as his wife had predicted he would) upon returning home to the affectionate and tactful wife. Psychological testing on this particular patient at the height of his psychotic behavior had revealed no psychotic ideation whatever at the test level; the Rorschach appeared to be that of a basically normal individual, and brain damage did not appear severe. Because of the favorable test results, the psychologist supported the wife in her wish to move the patient home.

A word of caution to the psychology trainee is in place here. In the kinds of cases described above, where emotional disturbance is marked, it is just as well not to be too positive that regressive or "deteriorative" signs observed in the tests are permanent; for even in the case of extensive brain damage the so-called deterioration signs may become less pronounced if the emotional state improves. For example, a middle-aged wholesale meat buyer upon coming into the hospital perseverated the response, "a quarter of beef hanging up," from Card II of the Rorschach through Card X. The Wechsler-Bellevue and drawings showed signs of visual-motor disturbance as well. On his test report the writer stated that the patient appeared very deteriorated and should be regarded as a custodial case. After three months of almost daily supportive contacts with a kindly neurologist the Rorschach was repeated at the neurologist's request. It was greatly improved, the perseveration having entirely disappeared.

The neurologist felt that no improvement had taken place in the patient's organic status and that the change must have been due to removal of the patient from the scene of a nagging wife and impossible economic demands, together with the doctor's friendly acceptance of the patient in his moderately deteriorated state.

The problem areas discussed above and the examples cited have been selected because they are representative of the sort of difficulties which, in the writer's experience, cause the psychology trainee the most perplexity in making a differential diagnosis. It can be seen that usually no single factor causes the confusion, but rather that a combination of personality, educational, cultural, situational, and emotional elements all interact to create a complicated picture.

Selection of Tests

This writer does not feel that any one special battery of tests is indispensable for the diagnosis of brain damage. The tests selected should be suitable to measure or evaluate the functions most likely to be affected by brain damage, such as memory, visual-motor functioning, perception, visual organization, the concrete-abstract category, judgment, emotional status. It seems to the writer that no psychological diagnostic evaluation is complete without covering those areas of functioning, regardless of the reason for the referral of the patient, since cerebral pathology can occur at any time and may give a superficial appearance of psychoneurosis or psychosis.

It is always best for the psychologist to use those instruments with which he is familiar and skilled in the making of diagnoses in all of the clinical categories, providing the functions listed above are covered. Selecting a test with which he is entirely unfamiliar in the hope of making a more definitive diagnosis, just because the test is supposed to be "good for diagnosing brain damage," is not likely to add much to a test battery, since the psychologist has no background of experience with it to contribute to his clinical judgment in interpreting the results. Of course it is not intended here to mean that new tests should not be tried; it is merely meant that they should not be relied upon until the examiner is familiar with what to expect from them.

There are several tests which, when used singly, at times yield so much information about the patient that a diagnosis can be made accurately without further testing. However, out of a battery of several tests, one test will occasionally make more of a contribution to the diagnosis than another, and it rarely is possible to predict in advance which one will be the most useful. For example, sometimes in early brain damage even as broad a test as the Wechsler-Bellevue will reveal no significant impairment, but the Rorschach may reflect a strong emotional reaction, which is characteristic of the brain damaged patient (feelings of impotence, disturbance in the body image, and the like). At other times, in the case of a patient with unusually good adaptive resources, the Rorschach may not show anything definite in the way of an organic disturbance, but the Wechsler-Bellevue may reveal significant impairment in such functions as memory and motor speed. For this reason, then, the writer prefers the use of several tests but feels the point of diminishing returns is reached when the battery gets beyond five or six tests, particularly if the Wechsler-Bellevue and Rorschach are included.

The basic battery used by the writer consists of the Rorschach [36], the Wechsler-Bellevue [61],* the Bender Gestalt drawings [4], and the Goodenough Draw-a-Person Test [17]. Space does not permit an exhaustive discussion of the use of these tests, but a few points on their application to the type of patient under consideration here will be mentioned.

The Rorschach will vary more than the Wechsler-Bellevue in the information it yields about the patient because of the fact that he is permitted to deal with the subject matter in his own way. If the test does not appeal to him, if he is afraid of it, or if he has difficulties in visual organization, the Rorschach may be meager. From the results of the Rorschach alone, it may not be possible to say what is interfering with his performance, but with the other tests in addition it may be possible to state with considerably more confidence what has led to a meager Rorschach. Usually, eight or ten responses are enough to determine whether the patient reacts like a brain damaged

* The *Wechsler Adult Intelligence Scale*, which appeared while this chapter was in press, is now to be preferred in most instances.

individual, and so a short record should not be regarded as of little use.

Since brain damaged patients frequently fear they may be going insane, as mentioned earlier, it is not uncommon for them to be afraid of the Rorschach, for on this test they have little means of judging the quality of their responses. For this reason, if brain damage is suspected and the patient is hesitant, it is best to offer a good deal of encouragement and reassurance during the test. (For example, when the patient gives a popular or usual response it is helpful to comment, "Most people say that's what that looks like.") It is also helpful to press for more responses as soon as the inquiry is finished, if the record is scant, by saying, "Probably you have noticed that the more you look at these the more you can see, and now I would like for you to try to find several more things." Card X is the best card on which to start this phase by asking for use of the separate details. If the patient is unable to see anything more, it is a good idea to point out one or two easily perceived concepts and allow him to continue to look. If this phase of testing is handled very permissively an entirely new and much more complete Rorschach may be the outcome. The patient's feelings about the test can be discussed at this time, a procedure that is very reassuring to him. The patient's ability to improve his Rorschach is no indication that he does not have brain damage, but capacity to improve diminishes as the pathology gets more severe and widespread. Thus, the final procedure of pressing for more responses contributes to the estimate of degree of injury.

A sufficiently complete inquiry to elicit maximum form level is particularly important in the evaluation. There is a big difference in the extent of brain damage between the patient who sees "bears" on Card II because they have a head and are black and furry and the patient who can specify all of the finer details. Capacity to give high form level by no means rules out brain damage, but a large number of high form-level responses indicates that the lesion probably is small and that it is less likely to be in the parieto-occipital area than in some other area. Further use of Rorschach indicators will be treated in a separate section.

One reason the Wechsler-Bellevue is important is the fact that it gives the patient's present intellectual functioning and some hint as to his premorbid level, both of which are needed not only in judging whether he has deteriorated but in evaluating his Rorschach performance. In addition, this test gives an indication of visual organization and visual-motor functioning, at least as measured by the items in the performance scale; both recent and remote recall, estimated by digit span and some of the items in the information test; judgment, estimated by the comprehension, picture arrangement and similarities tests; concrete and abstract functioning, estimated by the similarities, block designs, and picture arrangement tests; and still other factors which vary with the individual patient and the experience of the examiner in interpreting the test.

The clinical use of the Wechsler-Bellevue test for the diagnosis of brain damage is worthy of a special chapter. Only a few suggestions can be made here. It is best to give all the items unless the patient is so low in intelligence or so deteriorated that to do so would be discouraging for both him and the examiner. In giving the digit span, it is best not to stop with the second failure but to give a third or fourth try on a series of the same length as the one failed in order to see whether the patient can recover. This is particularly important in giving digits backward. On the similarities test these patients often give rather good, concrete answers, although faulty judgment is revealed very well on this test occasionally. This test frequently elicits expressions of intellectual impotence. The object assembly test on Form I is easy for most patients with mild or only moderate brain damage.

The picture arrangement test gives information concerning a number of functions pertinent to the diagnosis of brain damage (judgment, visual organization, disturbance in background and foreground perception, orientation, and other factors). Of course a test covering so many areas has the disadvantage that it is not always possible to be sure what causes a poor performance. It is a great help in evaluating a performance to inquire for the story, and this should be done regardless of the arrangement. It is not uncommon for the brain damaged patient to get the general idea of the usual story but

to be quite helpless in arranging the pictures in the proper sequence to fit his story.

A recent experimental study on the use of the Wechsler-Bellevue in the diagnosis of cerebral pathology is that of Hewson [30], who used a method involving ratios between combinations of subtest scores. Hewson worked with rather large numbers of cases, and her conclusions are worthy of study. She found, as this writer has, that lesions can exist without impairing the intellectual functioning. Her study did not include the Rorschach, and it is the experience of the writer that most of such cases will be at least suspected from the Rorschach performance. A reference on the Mental Deterioration Index of the Wechsler-Bellevue is that of Levi, Oppenheim, and Wechsler [44]. The writer has not found that this index can be relied upon in the diagnosis of the early cases of brain injury about which this paper is largely concerned.

The drawing tests yield varied information, including perception of Gestalten, visual-motor coördination, disturbances in body image, and visual peculiarities. A discussion of the interpretation of these drawings is beyond the scope of this chapter. As far as the writer knows there are no really adequate manuals for the use of these tests on all kinds of hospitalized patients, and at the present time there is probably no substitute for the experience of the clinical psychologist who routinely uses these drawings and is familiar with the productions of many types of patients. Administration takes very little time, and the examiner who is pressed for time can score other tests while the patient is making the drawings (the patient is less self-conscious if the examiner is busy, anyway). The bibliography contains two references in addition to the manual on the use of the Bender Gestalt drawings on brain damaged patients [7, 24] and a reference on scoring [9].

Since brain damaged patients not infrequently have motor or speech handicaps that make use of the regular procedures impossible, several other tests should be mentioned: If the patient does not talk well, the use of the Graphic Rorschach [18, 19] may be valuable. However, in evaluating the performance it should be kept in mind that Grassi's standards were established on relatively severe

cases of brain damage. When the patient cannot talk, the Graphic Rorschach is more useful for evaluating perceptual organization than for getting at the finer nuances of his emotional reactions.

Benton [8] has introduced a multiple-choice visual retention test for patients with speech or motor handicaps. Benton feels that this test also helps to differentiate between parieto-occipital and frontal lesions.

A test introduced at the 1952 APA meetings is the Hooper Visual Organization Test [32]. This test probably is a good measure of abstract capacity as well as visual organization. In its present form, administration requires only that the patient be able to name the objects; thus it is good to use for cases of motor handicap. It would be possible to make a multiple-choice form of this test also for patients who cannot speak, but such a form is not available at this writing.

A test that is especially useful for patients who cannot talk and also for patients who have sufficient motor disturbance to be poor candidates for drawing tests is the Mosaic [62]. Since some brain damaged patients have impaired color vision, it is advisable to give a color discrimination test before judging the Mosaic performance. This test gives indications of visual organization and abstract capacity as well as the patient's emotional reaction to a new task.

The test batteries of Halstead [22] and Bender and Teuber [5, 6, 60] contain other excellent visual organization tests and special laboratory tests not in general use. Of these, the flicker fusion test probably would be the most valuable addition to the battery suggested above. Halstead's original battery of twenty-six tests includes the Rorschach blots presented from lantern slides in multiple-choice form but not the individually administered Rorschach. Halstead's emphasis is more on the intellectual and perceptual deficits, with less stress on the emotional effects of the brain injury.*

The Goldstein and Scheerer [15] tests of abstract and concrete behavior are very useful, particularly if the patient cannot make the

* Since completion of this chapter another test of visual organization that may be used individually or for rapid group screening has been reported: H. M. Grayson, "Evaluation of a Brief Group Screening Test for Organic Brain Pathology," *Am. Psychologist*, 1954, 9, 383.

first four Wechsler-Bellevue block designs. However, for most cases of mild damage these tests are too easy unless the patient is below average intelligence. The monograph in which the tests are described is probably the best analysis of the test behavior of the moderately and severely brain damaged patient appearing in the literature.

Other authors describing the experimental use of psychological test batteries are Aita, Armitage, Reitan, and Rabinowitz [1], Armitage [3], Hoedemaker and Murray [31], Lynn, *et al.* [45], and Ruesch, *et al.* [55]. Hebb [27] reviews some of the literature reporting on use of tests and Teuber [60] critically evaluates a number of tests, reviews some of the literature, and sums up his own impressions. Teuber's chapter contains many sound observations and is worth careful study. Like Halstead, he does not emphasize the emotional element as an aid in making diagnosis, and his main concern is localization.

The Use of the Rorschach Test in the Diagnosis of Brain Injury

The Literature

As stated before, most of the reports on the use of the Rorschach test concern statistical studies of small and large groups of patients for whom a diagnosis of brain injury has been declared to be unequivocal by neurologists, neurosurgeons, electroencephalographic experts, or the like. Questionable cases having mild damage have usually not been regarded as suitable for study, and no one has published a psychological testing study involving the following of a large number of such cases over a long period until such time as a diagnosis can be established.

Selection of subjects in the published studies varies greatly. For example: Lynn *et al.* [45] used such a "pure" and carefully matched group of experimental and control subjects that they comprised only two per cent of over four thousand patients. In contrast, Aita, Reitan, and Ruth [2] used mixed "severe," "moderate," and "mild" brain injured cases and selected their controls from neurological and neu-

rosurgery wards, some of whom had "minor closed head injuries," "psychoneuroses," "idiopathic headaches," and, in a few cases, "one or two convulsions of unknown etiology." Piotrowski [50] established his famous brain damage "signs" on an experimental group of eighteen patients whom he called a "cortical-subcortical group" and about whom he did not state the nature of the lesion, its location, or how the diagnosis was established. For controls he used ten cases of "nongcerebral disturbances of the central nervous system" and five hysterics.

The difficulties of Lynn *et al.* [45] in attempting to get a pure and perfectly matched group of patients large enough for statistical study give us some insight into the problem of selecting patients for research in this field. Furthermore, their patients were suffering from "chronic post-traumatic diffuse brain injury," making the added refinement of localizing the lesion unnecessary.

The best known and probably most used Rorschach indicators for brain damage are the ten Piotrowski signs [36, 50], introduced in 1937. Piotrowski felt that at least five of these signs were necessary to make a diagnosis of brain damage. Three years later, as the result of a study of a larger group of patients [51] Piotrowski decided that signs were more useful when appraised qualitatively and that a quantitative reliance upon signs was insufficient. This viewpoint has been expressed in varying ways by most of the experimentalists since that time.

Of the original ten signs, none has been shown by further statistical study to be actually unworthy of retention. Evidence that appearance of the sign may be a function of the extent and type of damage has been produced statistically by Aita *et al.* [2] and this agrees with observations of the writer also. The signs most useful for our purposes, namely, the diagnosis of mild and moderate damage, will be summarized at the end of this section.

Aita *et al.* [2] also explored the Kelley "abstract behavior" signs and introduced four more signs of their own. One of their most interesting findings was that a sign occurring in a large or very large per cent of the brain injured might also occur in a fairly large per cent of the controls, while a sign occurring so rarely in the controls

that it could be regarded as good from that standpoint could be found in less than half of the brain injured.

It is probable that some of the overlap in occurrence of signs found by these authors was a function of the sort of controls they used. However, in this writer's experience, signs vary greatly from case to case, and even the best of signs will be found in non-neurological groups. Thus, the findings and conclusions of the Aita study approximate fairly well what the writer would have predicted even if a more ideal control group had been used. Because of its careful evaluation of so many signs in relation to severity of injury, this paper of Aita and his co-workers is worthy of close perusal—provided one keeps in mind that the appearance of any sign must be considered only in relation to the total context in which it occurs.

Hughes [33] applied weights to fourteen signs in a study of mixed brain damaged and mixed clinical groups, arriving at a point biserial correlation of .79 between presence and absence of brain damage. His most heavily weighted signs were the same Piotrowski signs that were found most useful by Aita *et al.*

Lynn *et al.* [45] stated that the Piotrowski signs might be more applicable to focal lesions than to generalized encephalopathy. They felt that, in general, good productivity and increased response to the brightly colored cards were evidences of normalcy and that low productivity occurred with both post-traumatic and psychoneurotic patients. Of twenty-three responses selected as "usual," post-traumatic patients gave more than one half, a greater number than normals gave. Post-traumatic patients used at least one *Fc*, whereas some psychoneurotic patients did not use any at all. Post-traumatic patients were unable to give alternate interpretations for the same blot area.

In addition to these signs, these authors made use of "descriptive constellations" in describing normal, psychoneurotic, and post-traumatic approaches to the blots. They described the latter approach as follows: (1) Reduced productivity, but not traceable to selective emotional responsiveness to the various aspects of the blots. (2) Use of usual concepts, to the partial or total exclusion of individuality or originality.

In applying these constellations, we need to keep in mind that

these cases were "pure"—that is, any functional neurosis prior to trauma had been ruled out—and had diffuse rather than focal lesions. The writer would predict that these constellations would hold only for non-neurotic patients with moderate and severe rather than mild damage. When they occur we are probably safe in assuming that in his premorbid state the patient was a normal individual and that at least moderate damage is present.

A recently published study which also has abandoned signs for the more comprehensive constellation approach is that of Hertz and Loehrke [29]. They offer thirty-four "configurations" of personality traits altered by brain injury. Although this writer does not (as of the date of completion of this chapter) know the nature of these configurations, such an approach appears more promising than the strict sign approach of the past.

One of the best known of the Rorschach studies is that of Harrower-Erickson [26] on brain tumor subjects tested pre- and postoperatively. She concluded that location of the lesion was not an important factor, a conclusion that disagrees with Rylander's [56]. The main characteristics of Harrower-Erickson's tumor protocols were constriction and uniformity. Some psychologists have attempted to apply these findings as signs for brain damage in all kinds of cases, but such a use leads to many errors in diagnosis. They are more applicable as signs for severe damage only.

Koff [37] successfully used the Rorschach to diagnose brain concussion under battle conditions where other techniques were not available. He relied on the presence of at least five of the Piotrowski signs to screen the patients; 91.79 per cent of the patients so selected were shown to have elevated spinal fluid protein, indicating central nervous system damage. Koff found that strong anxiety and hypochondriacal signs correlated with low spinal fluid protein and concluded that therefore these are neurotic rather than organic indicators.

In relying on these findings, we need to keep in mind that the patients screened by Koff were examined very soon after injury, when they would be more likely to give a more severe organic picture than

would be found some months later. Recency of injury should usually correlate positively with Rorschach indicators of severity; hypochondriacal signs tend to drop out as damage gets more severe, while anxiety will vary.

Ross [54] found anatomical perseveration in the Rorschachs of the brain damaged patient as well as in other groups. He suggested looking for a central nervous system lesion or for neurosis in such groups and recommended readministration of the test with instructions to look for something else when anatomical perseveration occurs.

Orchinik, Koch, Wycis, Freed, and Spiegel [48] report Rorschach and behavior studies of nine cases with thalamic lesions. These cases presented severe psychogenic disturbances before thalamotomy. The preoperative personality structure was found to influence the results, but they found no evidence of "so-called organic" post thalamotomy change in the Rorschach and conclude that this test is not sensitive enough to show changes observable behaviorally.

A consideration of the above conclusion would involve a theoretical discussion of what the Rorschach measures. We can offer one or two observations, however: One is that the use of chronically psychotic or severely neurotic brain operated patients for brain damage studies always seems to lead to results that are inconsistent with the results of studies of patients who acquire their damage by other means. Also, the situation is altogether different for the patient who submits to a surgical assault on his brain in order to overcome his emotional problems than it is for the patient whose involuntary acquisition of damage represents a severe threat to an already satisfactory, or fairly satisfactory, adjustment. The results of Orchinik and his co-workers do not seem inconsistent with the hypothesis that the response to brain damage, as revealed by the Rorschach, is in many cases largely an emotional one.

If the reader would like references giving complete protocols, Kelley and Margulies [34] give two records and clinical studies of convulsive patients, and Rashkis [53] reports the Rorschach, Wechsler-Bellevue, and Bender Gestalt results on a difficult differential diagnostic problem.

The Rorschach literature published prior to 1942 is reviewed by Klopfer and Kelley [36]. Other studies not reported here are listed in the bibliographies of the papers reported above.

Summary of Rorschach Indicators for Brain Damage

In reading the literature and in working with students and colleagues, it becomes apparent that certain misconceptions have crept into our thinking in respect to the brain damaged patient's Rorschach performance. Some of the most common of these misunderstandings will be considered first before we take up the more valid indicators. The *erroneous beliefs* we will consider are as follows:

1. That when brain damage is present the Rorschach form level always will be poor: This is true only of extremely severe generalized damage; and even in moderately severe damage a few detail responses may be quite well specified, the whole responses usually being less well organized. Aita *et al.* [2] found *F plus* per cent lower, but the difference was not great enough to differentiate the individual case. They found the mean number of *F minus* responses of no value.

2. That the patient cannot improve his response: The writer has observed repeatedly that this sign does not hold for mild and moderate brain damage. It is more often true in severe damage; however, these patients vary in their functioning, due to fatigue, circulatory variability, and other factors, and their test performances vary accordingly. Patients with mild damage and severe anxiety will be able to improve their performances greatly under reassurance and reduction of anxiety.

3. That the patient cannot use suggestion because he cannot shift his concept: Many brain injured patients are far more responsive to suggestion than most schizophrenics and some neurotics, particularly the conversion hysterics. They particularly are inclined to accept the popular responses they have missed if these concepts are suggested to them later. The main exception to this is inability to accept the popular response of "two people" on Card III because of the separation of the "legs" from the "trunks" of the figures.

4. That these patients are always coöperative: The brain injured patient probably feels more helpless than most patients and is therefore usually more coöperative if he feels the taking of tests may help us understand his problem; but basic personality affects coöperativeness in these patients just as it does in all others.

5. That the *FK* determinant does not occur: This score is probably more rare in moderate and severe damage, but it does occur in mild damage. Aita *et al.* [2] agree.

6. That spatial perception will always be disturbed, this being one factor in producing poorly specified responses: Lynn *et al.* [45] showed this was not true for their cases, and it is not true for other types of patients, including those with only frontal damage and the aphasics.

7. That creative thinking is always poor, this being the cause of stereotyped Rorschach performance: Lynn *et al.* [45] showed that while their encephalopathy patients did not do quite as well as normals on special tests of creative thinking, they did better than neurotics. The writer frequently finds evidence of good use of imagination, which can be construed as evidence of creative capacity, particularly in cases of mild damage and sometimes when damage is moderately severe.

8. That these patients become extraverts regardless of basic personality: On the contrary, they may become more introverted unless damage is so severe that they no longer experience very much anxiety, and even then the basic personality still influences the picture.

9. That lots of poor originals and unusual details will occur: This is generally not true, but the appearance of originals and rare details is dependent upon the nature of the disease and the premorbid personality. In diseases like paresis or cerebral arteriosclerosis with psychosis bizarre responses may occur; or if the patient was psychotic prior to injury he may still reveal the psychosis in his Rorschach by giving unusual responses.

10. That reaction time will always be slow: This is true only of severe, generalized damage. Mild cases are rarely any different from other patients in this respect [2].

11. That production will be restricted: This is also true of most

general medical patients and hysterics, so it does not differentiate. Patients with only mild and moderate damage frequently show little or no restriction in production.

12. That not more than one *M* will occur: This not only is not a good sign in moderate and mild damage but also is more likely to occur with hysterics and some of the psychosomatic groups; thus it is a poor differentiator.

13. That these patients give mostly poor whole responses: This varies but occurs mostly with severe damage only. Aita *et al.* [2] agree.

14. That these patients are incapable of abstract reasoning: Again this is most characteristic of severe damage, and frequently there is very little observable impairment when damage is mild.

15. That confabulation is a very common sign: When this sign appears it is a good one; but it usually occurs only when damage is severe, and it also occurs in the functional psychoses.

16. That the appearance of signs of anxiety makes the presence of cerebral pathology unlikely: Aita *et al.* [2] found anxiety present in all cases. The writer nearly always finds some indication of it.

17. That *P* per cent will be low: The writer finds it within the normal range in mild and moderate damage. Aita *et al.* [2] found this sign of no value in records of less than twenty-five responses but say it may be useful in severe damage only. Lynn *et al.* [45] found more "usual" responses than with normal subjects.

Indicators that hold up well, particularly for mild and moderate damage, according to the literature and in the writer's experience, are as follows:

1. Piotrowski's perplexity (*Plx*) sign (marked by patient's distrust of his own ability, interest in the "correct" response, turning to the examiner for confirmation and approval, and emotional responsiveness to the attitude of the examiner, probably due to feelings of inferiority and insecurity): This is a reliable sign for all degrees of damage, but it is better than the next sign (*Imp*) for mild damage, due to better insight [2, 33, 36, 50, 51].

2. Piotrowski's impotence (Imp) sign (the giving of a response in spite of recognition of its inadequacy, together with inability to withdraw or improve it): This is one of the best signs for moderate and severe damage, probably because feelings of insecurity and inferiority become complicated with appreciable intellectual deficit. It occurs less often in mild damage [2, 33, 36, 50, 51].

3. Piotrowski's repetition (Rpt) sign (the giving of at least three similar responses in a record regardless of form): This is a reliable sign in moderate and severe damage and even occurs in mild damage, although in such cases it may appear merely as a suggestion and not quite meet the above criterion [2, 33, 36, 50, 51].

4. Piotrowski's automatic phrasing (Ap) sign (repetition of the same phrase over and over, particularly as each card is received or laid away, such as, "Now what in the world do you suppose this is?"): This occurs in all degrees of damage and frequently in other patient groups as well, and so is less reliable than other signs [2, 33, 36].

5. Evidence of concern about the body image (manifested by inability to accept the usual figures on Card III because of the separation of the "leg" from the "trunk," seeing "rotting stumps," "broken-up" objects, and the like): This is one of the writer's most dependable signs, but it may occur also in aging individuals without abnormal brain changes, in involuntaries, and in such patients as amputees or paraplegics without brain damage.

6. Patient frequently refers to past experience in order to justify a response (for example, "This looks like an animal skin. I say that because when I was a boy we used to trap a lot and when we skinned them we would nail them up in the barn to dry, stretched out like this, and that's what made me think of it here. . ."): While this occurs occasionally in normals, sometimes in schizophrenics, and frequently in aging patients, it occurs so frequently in the young adult brain damaged patient that the writer uses it as a dependable sign. It probably represents not only over-concreteness but an effort to cling to reality in order to combat perplexity and impotence. As deterioration increases and the reality hold loosens, confabulation replaces it.

7. Poor discrimination between background and foreground, the

background being incorporated within the concept along with the blot foreground (not a reversal of background and foreground), such as seeing all of Card II as a butterfly and including the space as a spot on its back: The loose *W* tendency of more severe damage incorporates this sign; also it is possible that it indicates damage to visual perception and visual association areas, but this remains to be determined. It helps to discriminate between the brain injured patient and the hysteric or simple schizophrenic who also give poorly organized *W* responses. A good inquiry is necessary to elicit this sign. It is less likely to appear in mild damage.

8. Marked discrepancy between the Rorschach and Wechsler-Bellevue, to the disadvantage of the former: This occurs particularly when damage is still mild and may be a reliable sign for multiple small lesions, since the writer and others have observed it in multiple sclerosis and one case of carcinoma with multiple cerebral metastases.

9. Use of shading very early in the record, particularly on Cards I and II: This is one of the writer's best signs. However, patients who strongly resist acceptance of their disability may deny or fail to use shading. Lynn *et al.* [45] say at least one *Fc* occurs.

10. Pickiness (picking out a small area on nearly every card and referring to it as "sticking out" or "sticking up." For example, seeing objects or parts of objects "sticking up" in areas less commonly used for this purpose. These must not be confined to just the commonly seen projections, such as the "tentacles" on the usual butterflies, and the content does not have to be always the same.): This sign was learned from Klopfer and is especially good for indication of small focal lesions. It occurs occasionally in sexually impotent neurotics as well, but in the absence of other evidence of neurosis or sexual difficulty can be relied upon as a very dependable sign for the presence of a small focal lesion, usually accompanied by seizures.

11. Perseveration of a content idea (unlike the *Rpt* sign, the blot area chosen is not inappropriate in form—for example, seeing a "squirrel head" on nearly every card): Also from Klopfer. When this sign is combined with pickiness (for example, the "squirrel head" always perceived as "sticking up"), there is almost no question but that the diagnosis is brain damage, a focal lesion and accompanying

seizures to be suspected. In such cases the basic personality structure probably is somewhat compulsive.

12. A Rorschach with passive content (mild color, gentle or inactive animals, and so on) accompanied by very aggressive Thematic Apperception Test content (people fighting, killing, and the like) and signs of deterioration usually appearing in the Wechsler-Bellevue performance: The writer has often observed this combination in the performance of epileptics with grand mal type seizures.

13. Covering part of the blot in order to see the uncovered part better: This is so rare in normals that when it occurs it can be regarded as a reliable sign, but it is not common in organics either. Aita *et al.* [2] also found it.

14. Variability in quality of performance: Noted by Lynn *et al.* [45] to be greater than for normals. This writer finds this more frequently in mild damage when anxiety is severe. It is not a good sign to differentiate between brain damage and functional disorders, of course.

15. Catastrophic reaction (being overwhelmed by anxiety and unable to deal with the blot material at all): Probably originally from Goldstein. Aita *et al.* [2] found this in 31.7 per cent of brain injured and only 1 per cent of control subjects and regard it as a good sign. The writer considers it reliable when it occurs but observes it infrequently and wonders if it is not a function of the manner in which the impotent feelings of the patient are handled (see the section describing desirable test administration, page 353).

16. Self-derogatory remarks intended to be humorous but having a grim note (for example, this comment from a patient with left and right frontal and parietal damage with verbal I.Q. of 118 and premorbid I.Q. of 140, "I didn't use them in the original concept—I didn't want to sound too much like a raving maniac."): Such remarks reflect the underlying fear of insanity and a concern for reality which is less common in the functional psychoses.

17. Fine details may be very sharply seen, while at the same time the attempt to organize whole responses is poor and shows helplessness (concreteness).

18. Giving in to color on Cards VIII, IX, and X, particularly giv-

ing mild *CF* responses: This is common as damage progresses from moderate to severe and also is an aging sign.

19. The ready use of *FC*: This depends considerably upon previous personality, being a better sign of good premorbid adjustment than of brain damage *per se*, but is an aid in differential diagnosis if the request is to rule out schizophrenia.

20. Silly specifications, given with a flavor of cheerful irresponsibility and occurring along with what appears to be an understructure of common sense: This approach occurs in the Korsakoff and other toxic states, such as drug intoxications. It represents a temporary euphoric state in the latter, but dysphoric feelings may be revealed as well if the patient has some insight. Brain tumor cases with elevated intracranial pressure also can show a similar picture, depending upon which structures are impinged upon [47].

21. Inability to break down the blot into parts in order to see two or more separate concepts, with the result that objects or parts are combined inappropriately. (For example, to Card VI, "This is a bear hide and it has a totem pole on top of it." In the inquiry the patient explained that he thought of the two concepts being combined for a wall decoration. Another example is the use of the upper red details of Card II as heads of the "bears," which are seen as dancing or fighting, although the patient comments that the red details are unsuitable for bear heads because of color and shape.): This is not a very frequent sign but is uncommon in normal records. It probably represents both impotence and inability to shift adequately from one concept to another.

22. Sensibleness (even when delusional ideas are expressed the connections between the delusion and concrete reality usually are readily apparent and understandable to the examiner): This is a help in differentiating the organic psychotic from the schizophrenic. An alternate description of this could be that poor judgment is shown in organization of a concept that is otherwise reasonable.

23. Few alternate interpretations for the same blot area (actual inability to do so upon request implied): Lynn *et al.* [45] and Aita *et al.* [2] say this is a reliable sign. However, it is also true of some other patient groups and it is not a good sign for mild damage.

Quite a few additional Rorschach signs have been offered from time to time, and of these we will consider three:

1. Piotrowski's color naming (Cn): Aita *et al.* found this sign less frequently than Imp, Plx, and Rpt, but state it occurred so rarely in controls that they regard it as useful in mild cases. On the contrary, the writer has found it to occur extremely rarely in mild cases and, since it occurs much more frequently in schizophrenia, regards it as a poor sign. Such a difference of opinion makes this one of the signs most in need of further experimental study.

2. Aita *et al.* [2] rank "edging" close to Plx in importance. Because the writer has seen it occur only rarely in brain damage and quite frequently in schizophrenia, she has come to regard it as a schizophrenic sign. Thus, this is also a good one for further study.

3. The writer has found that Cards V and VIII are almost never rejected and that they usually elicit expressions of pleasure and relief because the popular "bat" and "animals" are so easy to see, offering a welcome relief from feelings of perplexity and impotency. However, Aita *et al.* [2] found Card V among the three most frequently rejected (Cards V, VI, and IX). Therefore, further study of rejections is needed to clear up this point.

Conclusion

Probably the first conclusion that can be drawn as a result of reading the foregoing is that a great deal of work remains to be done before degrees of dependability of constellations and signs can be more reliably determined. We have noted that the majority of the clinic cases referred to the psychologist will have inconclusive neurological signs, implying mild brain damage in most cases, and that very few of such cases have been studied experimentally.

The writer feels that great numbers of these mild cases have to be studied and understood individually before it can be possible to design experiments that will bring out the differences between such patients and other individuals. She believes that real differences exist

but that they are variable, just as basic personality and socio-economic opportunities are variable. She feels that it may never be possible to reflect these differences as successfully in scores or ratios as in "constellations," as suggested by Lynn *et al.* [45], or "configurations," as offered by Hertz and Loehrke [29]. In this chapter the writer has attempted to show that evidence for certain kinds of emotional reactions and ego defenses may be considerably more significant diagnostically than actual intellectual deficit when the pathology is mild.

The most urgently needed research on this subject requires the selection of an experimental group from patients who have been referred to the psychologist because of doubtful neurological diagnosis and who have been followed until presence or absence of brain damage is definitely determined. Test protocols obtained when symptoms first appear but diagnosis is still in question should contain the signs or constellations that will prove to be the most useful in the clinical evaluation of these patients.

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Diagnostic Case Studies of Male Adults Having Organic Brain Damage

The cases presented here have been selected to illustrate some of the points made in Chapter 11 regarding diagnosis of brain damage, with particular reference to the Rorschach test. Care has been taken to select patients who have been followed closely over a long period of time and for whom the diagnosis of brain damage was well established by neurological, neurosurgical, and other procedures. An attempt has been made also to present some variety in disease and in size and locus of lesion. Ages are varied, ranging from 27 to 57 years. All the patients are male World War II veterans.*

In two of the cases brain damage is rather severe, as measured by extent of lesion (Cases 3 and 4), while in the remainder the damage ranges from mild to moderately severe—as nearly as can be determined without surgical exploration. With the exception of Case 1, an effort has been made to present material in which organic signs are of the less obvious sort, such as appear frequently when the making of a neurological diagnosis is not easy. Thus the cases are as nearly as possible representative of routine clinic referrals, in which the referring request is for aid in differential diagnosis.

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In the discussion that precedes each protocol the patient's individual personality problems have been largely ignored, and only the organic aspects of the protocols have been stressed. The reader may wish to make his own interpretations regarding psychogenic personality problems in these men. As he does so he should keep in mind certain vital information: All but two (Cases 3 and 5) had been married for at least several years and all marriages with one exception (Case 4) were regarded as "happy." All had made satisfactory economic adjustments prior to illness, and two (Cases 2 and 3) are known to have adjusted well economically after the original onset of disease. None of the men ever had been regarded as having any sort of psychiatric disorder prior to the onset of his neurological disease, and most of them had apparently made a well above average military adjustment.

For the beginning student, it might be well to add that these cases were selected primarily for their usefulness in illustrating a brain damaged performance, and excellence of test administration was regarded as of only secondary importance. Several examiners, most of whom were graduate students in clinical training, administered the tests.

Case 1

Approximately three months prior to testing this 57-year-old patient suddenly blacked out, recovering consciousness several hours later. He stated he had never experienced spells of this kind previous to or following the one mentioned. However, just prior to his admission to the hospital he underwent an acute, transient psychosis which he described as "a lapse of memory," "a period of laughing and crying," and "a time when I thought I saw old friends and relatives who had been dead for years." During testing he was very good-natured and showed no confusion or disorientation. The neurological opinion was that the patient had suffered a cerebral hemorrhage. Psychological testing was repeated five months later at the request of the neurologist, who felt that the patient's condition was

slightly worse, and the tests showed evidence to support this opinion. Only the first Rorschach is shown here.

This Rorschach is presented because, although brain damage is not yet severe, the protocol contains a number of the classical signs regarded as diagnostic of brain damage. These include:

1. Not more than one *M*.
2. Rather mild automatic phrasing (such as the repetition of the phrase, "Now, what do you call that!").
3. Response time over one minute (average response time is 67 seconds).
4. Less than 15 responses.
5. Mostly whole responses.
6. Perplexity (see, for example, comments indicating he is having difficulty dealing with the blot stimuli, particularly in evidence in his reaction to Cards III, IV, VI, VII and IX).
7. Preoccupation with parts of the blots "sticking" out, which in this case is not yet severe. (See Card II, ". . . he stuck his paw up there . . . ;" Card IV, ". . . his head and his ears sticking up;" Card V, ". . . tail stuck down there;" Card VI, ". . . nose there stuck up on boards and whiskers sticking out from his head.")

Genuine impotence (the giving of a response in spite of the patient's own recognition that it is inadequate) does not appear, and this is consistent with the neurological opinion that damage is still mild. Other factors that add to the organic impression are as follows:

1. Rejection of part of the human figure on Card III, along with concrete remarks about the rejected part (in this case calling the usual foot a fish tail). With the brain damaged patient the leg of the figure is the part most commonly found unacceptable.
2. Giving with apparent ease rather mild color responses on the multicolored cards, although "blood" is given on Card II, revealing the emotional lability that frequently follows brain damage in otherwise reasonably well-adjusted individuals.
3. Remarking that something is undergoing deterioration (see Card VIII, I, inquiry).
4. Appearance of mild paranoid signs. (See Card IX, 2: "Well I

caught that eye there first and from there I could trace out an outline of his head.”)

5. Repeating the same response at least once before relinquishing the card or going on to the next response, a form of behavior that is probably related to automatic phrasing.

Rorschach Protocol, Case 1

CARD I

PERFORMANCE

11"

(Holds card at arm's length)

1. That could be a butterfly.

W F A P

14"

INQUIRY

1. (Can you show me its parts?) Like there would be wings—feelers coming out from the head. Body there in the middle.

CARD II

PERFORMANCE

17"

Let's see now, what would that be?

1. That could look like a couple of cub bears fighting. Nose, etc. I don't know what that red is, though. That could be a couple of cub bears fighting. Looks like he stuck his paw up there and he's got blood on it.

W FM, CF, m A P

1' 15"

INQUIRY

1. (Show me the bears.) Ears, that's his eye, nose—both got their nose stuck together like they're fighting. Front paw's got blood on it. Clawing at each other—blood flying out there, specks. You wouldn't hardly call all that nose —'course that's extra—they wouldn't hardly have a nose that big, but that's the best I can make out. Must have been fighting 'cause they got blood all over those front paws there.

CARD III

PERFORMANCE

40"

Now what do you call that! Huh! I don't know. Hard to say (smiles).

1. Looks like it might be a man or double men picking up something—head, neck—but it don't look like a foot.

INQUIRY

1. Yeah, that was a couple of fellows picking up a weight or picking up a bundle. Funny shaped head at that.

PERFORMANCE (*continued*)

Looks like they got kind of a fish tail. Red there, I don't know—that doesn't look like it has anything to do with it. Men there, two men rather, stooping to pick up a bundle there. Kind of an odd picture.

W M H P

1' 32"

CARD IV

PERFORMANCE

35"

Now, what do you call that. Hmm. I don't know what that would be. Up-side down. V

1. V Looks like a bat turned upside down. Looks like a bat flying. Head and ears. Well, I guess that's all I can see in that. I just see a bat, what you might call a bat.

V W FM A

1' 31"

CARD V

PERFORMANCE

23"

1. V That looks more like a butterfly than the other did. Wings up there at the top—feelers there. A butterfly I guess.

V W F A P

55"

INQUIRY (*continued*)

Nose, head. Got a high standing collar on. But they ain't got no feet—got feet like a fish tail. Ain't got no feet. I don't know what that red would be. Don't form nothing significant.

INQUIRY

1. There's his head and his ears sticking up. There's his wings out there. That's just a bat. That's all I can see there. (What gave you that impression?) Oh, I don't know. It's just the shape of it—a bat, flying out with his wings spread out. These could be called feet—don't look exactly like feet, but could be called feet. Tail there.

INQUIRY

1. That's a butterfly, too, 'cause there's the feelers that comes out of his head and there's his wings spread out. Tail stuck down there.

CARD VI

PERFORMANCE

37"

Now, what do you call that! Well, well, well! They're getting harder all the time, aren't they? Let's see—what could I call that?

1. I'd say that was a skin of something that was put out on a board to dry. A coon skin that's been put out on a board to dry. That's all I can see in that.

W F Aobj

1' 27"

INQUIRY

1. That looked like a coon skin spread on a board to dry. Looks like nose there stuck up on boards. That's the rest of the body. Wasn't cut very good, but that's the way it is. Should have a big bushy tail if it's a coon, but no tail. That looks like his nose to me and that looks like whiskers sticking out from his head. (What gives that impression?) Well, just the general appearance of it—looks like a coon skin stretched out on a board 'cause it was spread out that way. (Anything else besides the shape?) There it looks like the little claw to me of the front foot. (Anything else?) This here wouldn't be sticking out that much if it were a skin. Spread out too much.

CARD VII

PERFORMANCE

57"

What could that be? I can't figure out what that would be.

1. I'd say that looks like a rabbit head but that's just the top part of it. This here don't have nothing to do with a rabbit though. Hmm. I can't figure that one right down here. . . . Could be two rabbits looking at each other. Feet there. Could be sitting on something, but that wouldn't hardly be right. Don't get very much out of that picture.

W FM A

2' 10"

INQUIRY

1. Looks like rabbit heads to me. Nose, ear, eye, one foot sticking out there. The rest of it doesn't look like a rabbit—down to here.

CARD VIII

PERFORMANCE

13"

1. Now . . . that looks like an orchid to me—beautiful flower of some kind. Especially that down here—looks like the orchid part. That's what I'd call that—I'd call that an orchid. It's the coloring of an orchid, too. Pretty flower of some kind.

W FC PI

1' 7"

CARD IX

PERFORMANCE

53"

Ho, huh huh. I sure don't know what that could be. Don't look like anything I ever saw before.

1. That looks like it might be kind of a wall back there, with some portholes in it, but that's just that particular part of it. What would that be? I can't see anything there of any significance. All I see are those portholes there. The rest of it is just color.

D F Obj

2. < Now I can see a kind of a moose-head there—nose and his eye. That's just this blue part here. Just putting it that way, you'd say that's a moose. His eye and his nose.

< D F Ad O

2' 55"

INQUIRY

1. Now that looks like an orchid to me—a beautiful flower. The dark part here could be dead, died down, petals from yesterday—started to die out. Fresh part here. The whole picture just looks like a flower to me—a big orchid.

INQUIRY

1. Wall back there with portholes—like it would be a fort. They have those holes to shoot through.

2. Nose or mouth part. This is the eye, whiskers under here. Should have some horns back here but it doesn't. (What gives you that impression?) Well, it's just the way—it looks like a moose's head to me. (Just shaped like one?) Yeah. (Anything else?) Well, I caught that eye there first, and from there I could trace out an outline of his head.

CARD X

PERFORMANCE

20"

1. Well, that could be a series of creatures. Them blue parts look like spiders crawling up on a leaf.

D FM, FC A, PI P

2. What could that black be. That black there could look like the head of a parrot—eye, beak, top part there. That's just the black part.

D F Ad

3. And this yellow part here looks like the governor on a steam engine—it's got the balls, etc. Looks like the governor of a steam engine—they're shaped like that.

D F Obj

That's all I can see in that picture.
That's all I can see in that.

2' 37"

INQUIRY

1. That looks like a spider there with all his legs sprangled out crawling on a leaf—that blue part. (What makes it look like a leaf?) Well, it's just green—looks like it might be a leaf there.

2. I'd say that black part was the head of a parrot.

3. Of course that looks like the governor of a steam engine.

The rest of this stuff, I can't see any significance here. Just color. Don't make no particular picture.

Testing the Limits

(Subject was asked which card he liked best.)

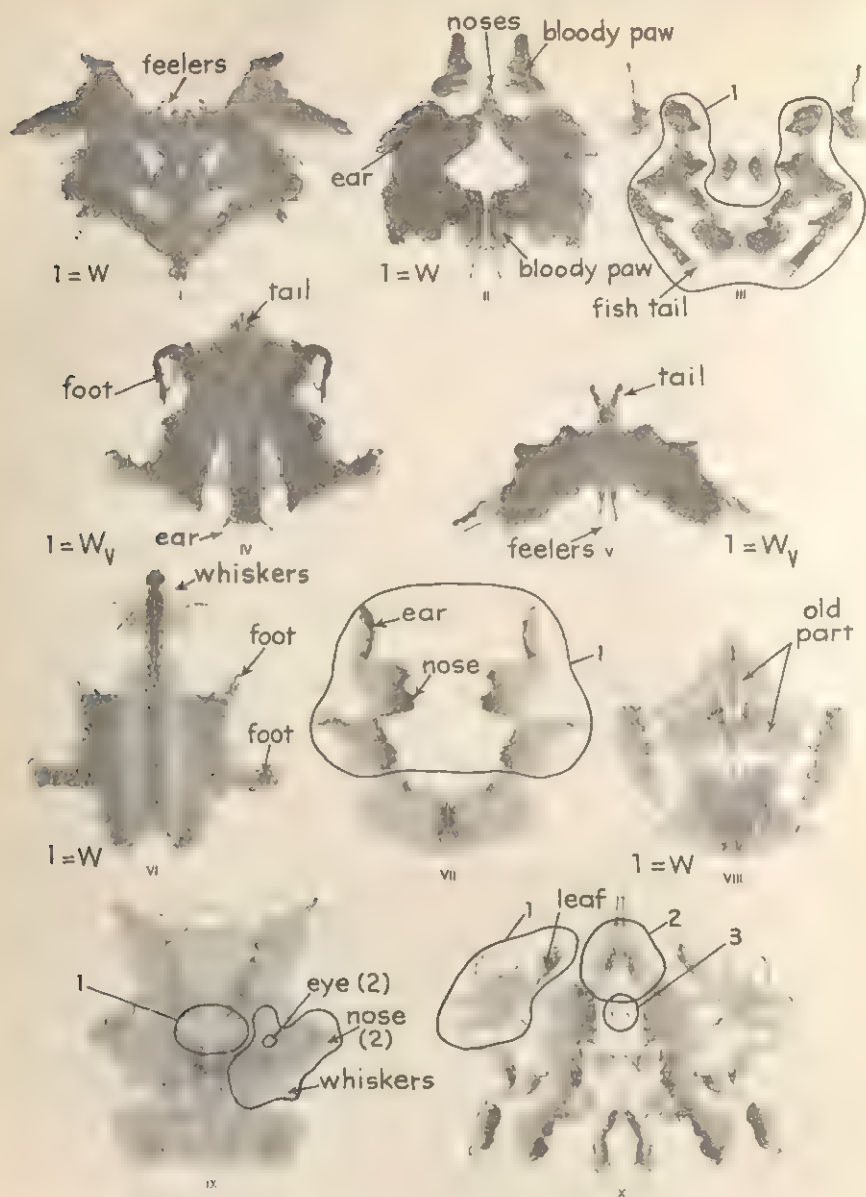
S: (Card VIII) I think this here orchid is the prettiest of all—more like a picture. In the rest you have to use your imagination. Here I don't have to use much imagination.

(Subject was asked which card he liked least.)

S: (Card X) You mean which would be hardest to figure out? I guess this one here. Not much to pick from here—so much stuff that don't even mean much there—just colors, you know.

(Subject was asked whether the outside or inside of the skin on Card VI was showing.)

S: Outside. Nose there—ripples on leg. For that matter, a coon has a black streak down its back. (Does it look furry?) Well, yeah, you



CASE 1 *Location Chart, reproduced from Individual Record Blank (copyright by the Rorschach Institute, Inc., published by World Book Company).*

could call that fur there (rubs blot). Not smooth there, it's rough like a fur would be.

(Subject was asked what the lower area of VII might be.)

S: I can't connect it with anything in particular that would look like that. I can't think of even a thing—not even suggest anything. Two parts joined together—unless it would be two rock formations where they are joined together, come together.

(Subject was asked if he could find any human genitals in the cards.)

S: Well I don't know. I hadn't never looked for that yet. Gosh no, I don't see anything. No, I don't see any. No, don't look like sex organs to me anyplace. No, I can't particularly see any sex organs in any of them pictures.

Case 2

This 35-year-old male had suffered from blackouts for about eight months prior to testing. In these attacks unconsciousness lasted from a few seconds to three or four minutes, followed by a period of confusion and irritability but no convulsion, at least as far as had been observed. A broken arm was reported as an injury due to an attack, and he had wrecked his truck during a blackout while driving. He was referred for psychological testing for evidence of hysterical components in his personality. Early in his hospitalization his neurological examination was essentially negative although the electroencephalogram was "consistent with an epileptic syndrome." Several months later, however, he showed some positive neurological findings. His condition gradually cleared, and psychological testing ten months later showed a better utilization of the Rorschach material than shown here. The final neurological diagnosis was multiple sclerosis.

The patient's first Rorschach protocol is presented here as an illustration of the kind of poor-quality record sometimes obtained from individuals who still are fairly free from serious intellectual deterioration but who have some mild or moderate cerebral damage. His scores on the Wechsler-Bellevue Scale, Form I, are as follows:

	WT. S.		WT. S.
Information	11	Picture Arrangement	13
Comprehension	16	Picture Completion	13
Digit Span	10	Block Design	11
Arithmetic	15	Object Assembly	13
Similarities	15	Digit Symbol	11
Vocabulary	13		
Verbal IQ	124	Performance IQ	123

Full Scale IQ 126

On the Rorschach, expressions of impotency or perplexity are quite mild, but obviously the subject is not confident in dealing with the material. There is a suggestion of perseveration (Card II), which may have been produced by the stress of color shock. There is a very mild tendency to be overattentive to pointed elements of the blots, which should not be overlooked—although ordinarily little importance might be attached to a beginning preoccupation with the blot projections which is so readily abandoned (“stingers” or “legs” on Cards I and II and “knobs” on Card III). The absence of color and human movement responses may be more a manifestation of basic personality than of brain damage, although the signs of general constriction, anxiety, and bodily preoccupation probably more nearly represent this particular patient’s response to an undiagnosed organic disease which was presenting a serious threat to his security. The recovery in the testing-the-limits phase favors an organic rather than a purely hysterical syndrome, since in the case of the latter marked resistance to changing the percept is common (probably because of the rigidity of the hysterical defense).

Altogether, organic signs in this Rorschach protocol are not very convincing, and in making the differential diagnosis between brain damage and conversion hysteria a great deal of weight was given to the Wechsler-Bellevue responses and the patient’s behavior in taking this test, which indicated him to be a relatively mature, responsible, although anxious individual. In reporting the test results a definite diagnosis was withheld and further observation and neurological in-

vestigation were recommended. This conservative treatment of the data was later shown to have been justified, as indicated by the final diagnosis.

Rorschach Protocol, Case 2

CARD I

PERFORMANCE

7"

1. Bug of some sort. A flying bee—something like that (turns card over; seems somewhat anxious).

W FM A P

50"

INQUIRY

1. Feelers, protruding eyes, like a bee; body, wings extending out. (?) Shape of the body, eyes, feelers. Wings spread out on the side represent a flying bug. (Bee?) Protruding portion in back, such as a stinger on a bee. (?) That's all.

CARD II

PERFORMANCE

30"

1. Back of a bug with stingers. Legs are extending out from the back. That's about all for that.

W F A

1' 5"

INQUIRY

1. Feelers on the front (bottom), legs protruding out back (top red). Shape of some bugs I've seen; legs protruding, stinger at rear. (Stinger?) More like a pincher on an old pinch bug—pointed—could be a stinger. (?) That's all.

CARD III

PERFORMANCE

15"

1. Bone structure; an X ray, vertebrae, something like that.

W Fk At

40"

INQUIRY

1. Vertebra. (Center D.) The red is another vertebra. The shape. These are hip bones or part of the leg bones, with knobs on them. (Usual people's heads.) (Hips?) More than knobs than anything else. (X ray?) Could be bone structure as seen in an X ray.

CARD IV

PERFORMANCE

15"

1. Could be the skin of an animal that's been tacked up on the wall.

W Fc Aobj

40"

INQUIRY

1. Head, ears, front legs, hind legs. It looks different with this (lower *D*); the shape of the blot. (Lower *D*?) Not part of it—by using that I couldn't make anything. (Fur?) The shape, the head of an animal that's been skinned, and the shading.

CARD V

PERFORMANCE

5"

1. Could be a butterfly or almost any kind of insect with large wings.

W FM A P

25"

INQUIRY

1. A butterfly or large flying bug. Head, feelers, wings, tail or feelers. (?) Shape, looks like spread wings. (?) Head to the front, tail; some flying bug, butterfly, grasshopper; something like that. (Flying?) In motion through the air.

CARD VI

PERFORMANCE

15"

1. Hide of some animal, with a long neck.

W Fc Aobj P

2. Some type of insect or a . . .

D F, FM A

45"

INQUIRY

1. Head, I disregarded these (wings), long neck, something like a weasel. (Hide?) The head, shading down the back, eyes or ears here, a stretched hide—legs extended out to the side. The center of the animal is usually darker than the rest of the fur.
2. Head, with a long neck, body, legs arched out to side. (Kind of insect?) Legs like a spider, head shaped like a water bug of some sort. (?) That's all. I thought of a water bug when I first looked at it.

CARD VII

PERFORMANCE

10"

1. Map of some land portions.

W kF Geo

27"

INQUIRY

1. Body of land or a map. Resembles portions of land—coves, harbors, extended portions are peninsulas. The shading looks like it could be a graphic map showing altitudes of land. The darker would be mountains, the lighter near sea level.

CARD VIII

PERFORMANCE

15"

1. Bone structure, again showing part of vertebra or back.

D F At

37"

INQUIRY

1. In this one the only portion I could make like anything was the center. Spinal column, ribs, vertebrae. (?) The way the vertebrae go down through here; part extending could be ribs attached. (Ribs?) The fact that they are extending from the vertebrae, the rounding shape, like they might curve around.

CARD IX

PERFORMANCE

20"

1. It represents an insect like a spider or something like that with feelers in front.

W F A

40"

INQUIRY

1. The feelers came into it, and legs, one or two. (?) Feelers and general shape. (Shape?) Not a true picture—legs, sides, feelers in front, central body down through the middle. (?) Could be three legs per side. (Alive?) Dead—no life to it.

CARD X

PERFORMANCE

20"

1. It represents bone structure, in an X ray, or . . .

dr F At

2. √ A pattern like looking out through the leaves of a tree.

√ W F→FK Pl

33"

INQUIRY

1. Bone structure. (Top *D* and center blue.) The way they come into a central body formation. Looks like it could possibly be hip bones and a portion of vertebra. (Hips?) Out on either side, rounding. Vertebrae are the center portion of the back; they fasten on the side, with smaller bones leading out.

2. Branch here—see out beyond it; smaller branches, the trunk runs up through here. Though there is no color to make any kind of a picture at all, I assumed it would. (Trunk?) The heavy portion is not seen. Spreading out could be branches. (Points to side of top grey *D*.) (Leaves?) Shapes and patterns, as I've seen in the past. Not a tree or leaves so much as the pattern you get by looking through them.

Testing the Limits

(Subject was asked to sort cards into two groups.)

S: I separated them by color—color is the reason they belong together.

(Subject was asked which card he liked best.)

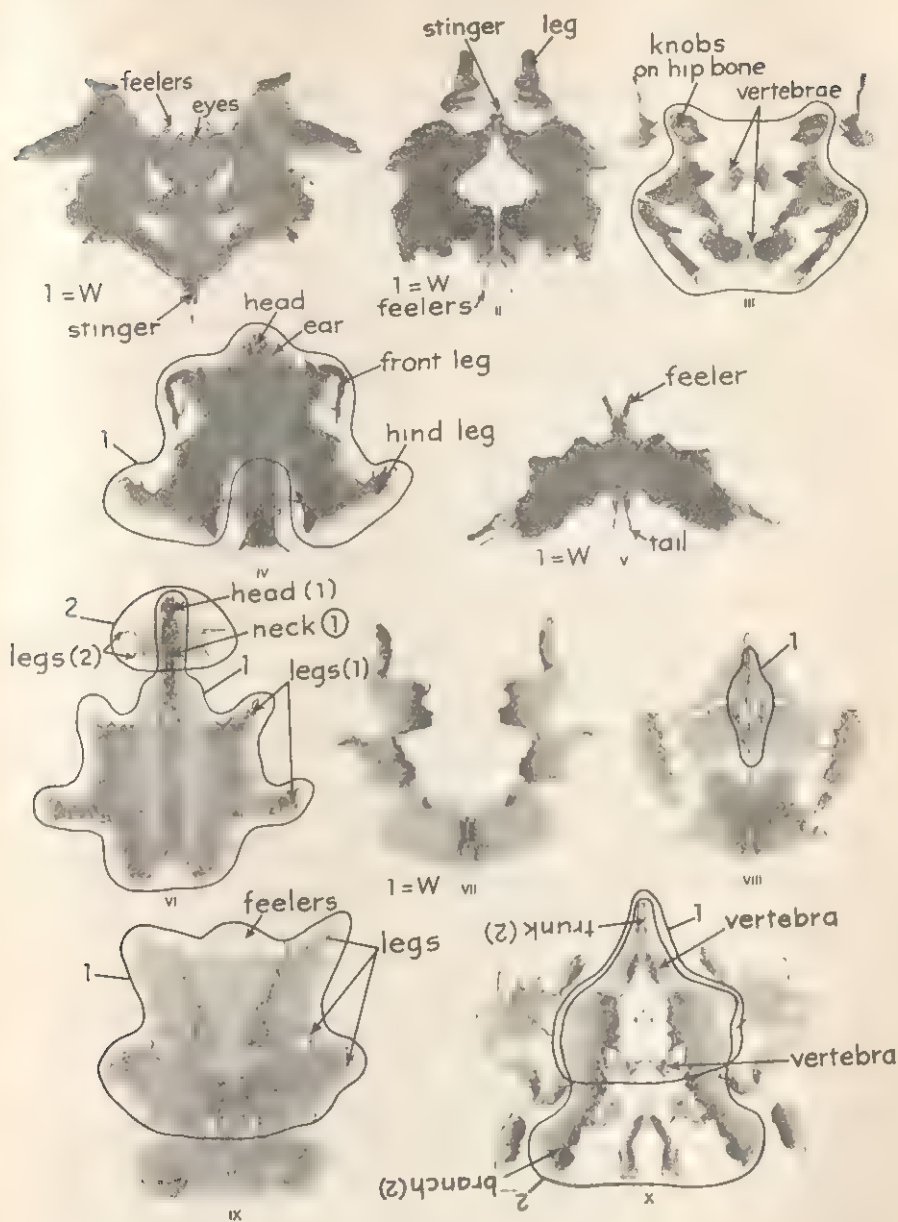
S: (Card IV) It really represents something, makes a clearer picture than any other.

(Subject was asked which card he liked least.)

S: (Card X) It represents very little to me—doesn't mean anything definite to me. Certain parts represent something, but it doesn't mean anything definite to me.

(Subject was asked to look for details.)

S: I see lots of them; a rabbit's head here (Card X); wild animals (Card VIII); a bow ribbon (Card III).



CASE 2 Location Chart

(Subject was asked to describe rabbit's head.)

S: Long ears, eyes, shading could be the nose, the shape looks like a rabbit, looking from the front.

(Subject was asked to describe the wild animals.)

S: Shape, legs, standing. The head, body. A wild boar or a bear. (Why boar or bear?) Head, shape of body. (Standing?) At edge of something; now it looks more like running. (Why?) Two legs are off the ground. (Running?) Making—charging something.

(Subject was asked to describe bow.)

S: The general shape; the center looks like a ribbon in reversed direction. Changes color to some extent. (?) Shape more than anything else.

(Subject was asked to find people.)

S: (Card I?) It's far-fetched—people dancing around a pole. Head, hair, dress, cloak; hands out here clasped around the pole. (Dancing?) Foot up in the air, streamer cloak flying out from the motion.

S: (Card III?) Could be people, but look more like birds or something with a beak to me. (As people?) Head, neck, eyes—doesn't resemble people but a very little bit.

S: (Card VII?) No. (Usual heads are pointed out.) I see it, but I wouldn't see it by myself. It has a slight resemblance—still pretty far-fetched.

Case 3

Eight years prior to psychological testing this 27-year-old patient was struck in the face by a hard instrument, resulting in a crushed nose which was repaired surgically with excellent cosmetic result. A few months after surgery the patient developed increasing nervousness, tenseness, occasional periods of feeling vaguely out of contact with his surroundings, and occasional mild clonic seizures. Previous electroencephalograms were reported to have been negative. The patient claimed to get benefit from sodium dilantin. He was referred for psychological testing for evidence of brain damage and for evaluation

of his emotional adjustment, since he complained of getting into frequent fights, particularly when drinking, and expressed some fears that he was becoming psychotic. The psychologist was asked to differentiate between psychosis and psychopathic personality as a basis for the behavior disorder.

The patient kept his appointments promptly, arriving ahead of time so as to be sure not to be late, and worked diligently and enthusiastically on all tests. He revealed a genuine interest in his occupation, at which he was making a good living, and there was no behavioral evidence of emotional disturbance.

The Rorschach of this patient is presented here because of its usefulness in contributing to a more precise diagnosis of the patient's symptoms. The other tests administered (Wechsler-Bellevue, Bender Gestalt, Draw a Person) were less helpful in making the differential diagnosis in this case, since they revealed less pathology than the Rorschach did.

The most striking characteristic of the Rorschach is the difference between the performance and the inquiry, the delusional and confusional features not being revealed until the inquiry. This sort of approach is very common with the brain damaged patient who develops a psychosis following injury. His intelligence is sufficiently intact to permit some systematization to the delusions, but feelings of impotence characteristic of organics who show deterioration are aroused when he attempts to organize his thinking (see sorting task in testing the limits). Although he does not have sufficient emotional control to avoid fabulatory combinations (see especially Cards I, *Add. 1*; II, 2; V, *Add. 2*), he is very careful to be accurate in his specification of determinants for his perceptions. Such an approach implies a desire to communicate and reveals little of the autism or withdrawal to a private world that characterizes most delusional schizophrenics. In his need to bind his percepts to reality, like many organics, he refers at times to past experience in an effort to justify what he sees (Cards I, 1 and 2; III, 2; V, *Add. 2*).

Other signs favoring an organic etiology for the disturbance are the early appearance of shading in the record, the ease of using it, and the rejection of the figures on Card III as people, although there

is no difficulty in seeing human figures elsewhere. Concreteness and fussiness about the shape are the usual reasons for the organic to reject the figures as human; these reasons are revealed here in the remarks about the heads.

Although perseveration is so common in organic records, the slight tendency seen here to perseverate the idea of the insignia does not differentiate him from the functional psychotic with a delusional system. The record has a number of the characteristics of records of functional psychotics. For example, he shows confusion when trying to name the animal on Card VIII, revealing the uncertainty that he has about his own drives, just as many schizophrenics do. The focus of his disturbance, which centers around aggression and passion, does not necessarily differentiate him from the schizophrenic; however, this sort of disturbance is the one most commonly found in the brain damaged patient who feels he is losing control of his impulses.

In general, it is the incongruity between evidence for a fairly good hold on reality (as revealed by other tests and the accuracy of specification on the Rorschach) and the delusional thinking (revealed mainly by the inquiry on the Rorschach) which leads to the impression of a psychotic reaction to brain damage. Reinforcing this impression is the content of the emotional disturbance itself, which consists of a preoccupation with the effects of aggression and loss of inhibitory controls. This sort of conflict, together with the defective judgment revealed in verbalizing the conflict, suggests that the lesion lies in the anterior region of the frontal lobes. Following psychological study, this impression was verified by pneumoencephalography, showing shrinkage of the cortex of the anterior tips of the frontal lobes.

It is not difficult to offer some hypotheses for the test picture found in this case: If we accept the view that the cerebral locus of inhibition and judgment lies largely in the frontal cortex, we can account for both the patient's change in behavior following the accident and for the nature of the delusions that developed as he fought against the changes occurring within him. Basically a conscientious but very aggressive person, when threatened with being overwhelmed by his aggressive, hostile impulses he defended himself by projecting the

unacceptable impulses outwardly, developing a delusional system involving all humanity and its struggle against immorality. Suiting his own needs, he perceived man as turning to a more war-like state in order to avoid degenerating morally. Such a view naturally made his own emotional outbursts less threatening. However, unlike the paranoid schizophrenic, his basic reality contact was too good to allow the delusional system to be an adequate substitute for reality, and he was frequently swept with anxiety lest he might be losing his reason.

Other emotional problems, such as a rather poor sexual adjustment, undoubtedly colored the picture, particularly in reference to the preoccupation with morals; however, the central problem seemed to be as outlined above. Explanation to the patient of the physiological nature of his difficulty, suitable medication, and reassurance appeared to reduce his anxiety greatly, and when last seen, two years later, he was adjusting fairly well. His conscientious avoidance of alcohol, at the doctor's admonition, undoubtedly helped to make this possible.

Rorschach Protocol, Case 3

CARD I

PERFORMANCE

7"

1. Well, it looks like a —an insignia.

W F Obj,Abs (O)

INQUIRY

1. Well, it looks like an insignia of a foreign country I was once in. Looks like —oh—spread eagle wings and a bear head, symbolizing conquering. (?) In the Orient—I was trying to think of it—Mongolian—they had one in Shanghai.

Add. 1: Of course this could represent humanity. (?) The shape is similar to a human and this here could be grasping for something, like a snake—could represent power and evil, and all that could be represented by an insignia; some sort of domineering person. This here all wrapped up in their basic—you know what I mean—their power.

PERFORMANCE (*continued*)

2. Like one of these door knockers you see in some of these houses—fancy design.

W Fc Obj

1'11"

CARD II

PERFORMANCE

8"

1. Looks like a ship in the center.

S F Arch O

2. These two black marks could look something like a bear.

W→W FM,CF A,Abs P,(O)

✓ That's all I can see on that.

53"

INQUIRY (*continued*)

... (E was unable to record all.)

D→W M,FM→Fm (H),(Ad),
Abs

2. Some rich people I knew on the boat had a door knocker—all kinds of curlicues—go in for all sorts of things—outmoded now. (?) The way this is symmetrical and all this fancy stuff—all sorts of fancy design inside.

INQUIRY

1. Here, like a battleship; see the keel coming down here?

2. See how the little snout comes up here? Two ears, tail, so full and thick, paws . . . (etc.). Could be used as a design of power in battle. (Insignia too?) Could very well be . . . (etc.). Could be used in California. Somebody could use it as a letter-head representing the old ways, which we are slowly turning back into anyhow, like in the olden days. We're going back into the old ways of life. (?) Wars . . . (etc.). (Patient continues with a long discourse about how we are returning to fighting—men want to fight; if they can't they degenerate. Feels we are degenerating now, our morals are deteriorating, etc. Feels the basic badness and aggression of man is breaking through to bring about man's destruction. Red represents blood where bears clawed each other.)

CARD III

PERFORMANCE

4"

1. Looks like two men—these.

W F H→(A) P

2. Two things here look like these elves you see in cartoons, you know.

D M (H)

- (1) Of course these look something like the face of an ant. (✓) That's all I can see out of that.

54"

CARD IV

PERFORMANCE

7"

1. Looks like a bear skin.

W Fc Aobj

2. Back of a crab. All I can see there.

D F A

31"

INQUIRY

1. (What about blot suggests two men?) Because it looks more mannish than it does womanish. Of course it gives all the indications here of a woman—it could be out of this world as far as that goes—like an ant—one of Walt Disney's. Neck is too thick to be that of a woman. Nothing feminine about it. (?) Well, they do resemble an ant in lots of ways, especially the head—if you put feelers on it it could resemble an ant, way they do in Walt Disney cartoons.
2. Right here, reminds me of a picture I saw in an opera, by a German in fact; Faust, I think, or one of those operas. (Patient describes.) A beautiful opera. (?) I can definitely see they look like a man in there. (?) Elf's hat or cap or streamers. Could be the arm here and even a little leg or costume—they don't have any rear end or legs—just kind of a mask. (Description of elves' part in opera justifies *M* score.)

INQUIRY

1. Flattened out; ears and snout. Looks like somebody did a poor job of skinning. Paw part. (Points.) Looks kind of weather-beaten or worn out. (See testing the limits.)
2. At an angle—see here, with the legs coming out.

CARD V

PERFORMANCE

4"

1. Center part looks like a snail.

D F A

2. Kinda resembles a bat in a lot of ways.

W F A P

3. √ Reverse it and it looks like a butterfly. That's all I can see there.

√ W F A P

32"

INQUIRY

1. See the feelers, how they come in like this? (?) Either end, because there are different types of snails—common garden kind like this (top of card) and then you have snails thick around (points).

Add. 1: I never noticed—looks like a woman's leg; looks like a girl if you had imagination. Hair, lips, nose; of course this would be her breast and, working down, her leg.

D F H

2. Yes, see how the wings are spread and two feelers on end of wings, but this part don't look like a bat (lower center *d*); got more of a hook.

3. √ And this here looks like a butterfly. (∧) Of course this way it looks more like a bat than it does this way (√). (?—for movement) I'd see in this position as a butterfly. (?) Because butterfly wings tend forward more than aft and do have two long feelers like that. (Anything besides shape suggest a bat?) No.

Add. 2: If you kind of look at it real close—did you ever read books on vampires? Looks like a vampire carrying away two women to use women for what he did use them for—a really scary picture . . . (etc.).

W M (H) O

CARD VI

PERFORMANCE

12"

1. Looks like some animal skin, like a coyote—yeah, a coyote. (Turns card several times.) That's all I can see that reminds me of anything.

D Fc,FC' Aobj P

43"

INQUIRY

1. The color—see how the pattern is kinda a greyish brownish and whitish? Or like a wolf, and head here like kind of a turtle—head of a turtle. (Does turtle head belong with skin?) You might have cut the skin and not wanted the head and cut it out.

Add. 1: (Locates turtle head)

d F Ad

CARD VII

PERFORMANCE

Reject at 43 seconds

That don't remind me of nothing. (Turns card and looks.)

INQUIRY

(E suggests he try to find something now.)

Add. 1: Might resemble a radar bearing on some harbor, like you'd see on a radar-scope of a harbor entrance. (?) Outlines of line. Would be a white color and rest would be black.

W FC',Fk Radar (O)

Add. 2: Of course that kinda resembles a frog (> V)—the rear end. You know how he swims in the water, his legs kicking out as they do—the rear motion.

V W FM Ad O

CARD VIII

PERFORMANCE

6"

1. Reminds me of two animals. I can't think—we'll say they remind me of some animal I've seen—can't think what kind. That's all.

D F A (P)

51"

INQUIRY

1. Let's see, looks like here it's got the mouth of a tapir and the body of a pig with the head of a jackal, or something like that. Reminds me of a scavenger animal. Of course the legs remind you of a field mouse or something like that. (Can you tell anything else about the animal?) No, I can't.

CARD IX

PERFORMANCE

15"

1. Reminds me of a fat man there—pudgy. (Turns card.) Well, that's all I can see.

D M,KF,Fm H→(H) O

40"

INQUIRY

1. See, kind of pudgy face and real chubby looking. You've seen those guys who look like pigs—face you know, representing wind blowing. Looks like he's blowing against clouds, and this is a mass of his cloud formation here. . . . (E missed some of this.)

CARD X

PERFORMANCE

Reject at 39 seconds.

(Turns card, shakes head.) Don't see anything that reminds me of anything.

INQUIRY

(E suggests he try to find something now.) (Patient looks.) (E asks what is difficult about it.) Everything is so splattered—it's hard to define.

Add. 1: Here looks like two faces—forehead, pudgy nose and mouth open, something more or less like an oriental design—maybe Aztec looking.

dr F,M Hd O

Add. 2: This kinda looks like a rabbit in here. (?) Well look—see the ears up here, the white around the nose, and this slant could be eyes up here. Could definitely be a rabbit.

D F,FC' Ad P

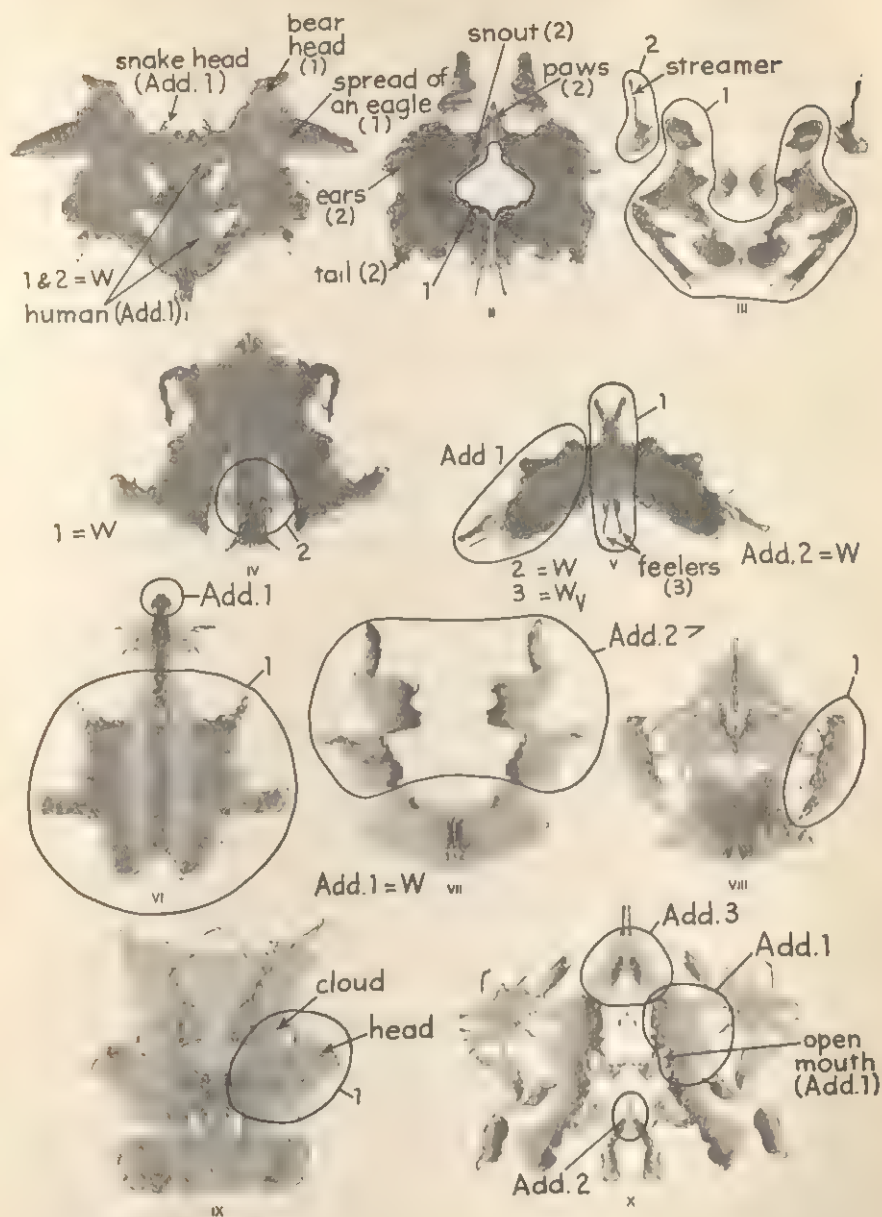
Add. 3: These look like fish—the parrot fish. (Is there a fish like that?) It's similar to that. (Where find?) A tropical fish.

D F A (O)

Testing the Limits

(Subject is shown the "red hair ribbon" on Card III and asked to find something else where shape and color are used.)

(Subject selects outer red on Card III.) This, when you turn it down, looks like a monkey. (Color help?) No, not too much—more the shape.



CASE 3 Location Chart

(Subject is asked to use color.)

S: Can't see any. (Shakes head; finds face in shading on Card II; looks at Card VI.)

(Subject is asked to look at Card X.)

S: Looks like a seal pup. (Outer orange *D*.) (Color okay?) Well, it would be a darker brown. (You mean you didn't use the color?) No, the color matched fair. This could be worms, color also included. (Lower center green *D*.)

(Examiner shows subject Card IV and asks if he had in mind the fur side of the bear skin.)

S: Very definitely.

(Subject is asked to sort the cards into two groups.)

S: (Cards VI, IV, II, V) Skins—same class of animals. (Cards V, I) Emblems or characteristic of the same ideas. Women could symbolize everything above this. (Cards VIII, IX, X) Symmetrical in idea—they all line up; just about right in coloring and even in design. In other words, on the general principle of everything that's evenly symmetrical; alike and their color is even-like. Everything is so evenly spaced in design. (Cards III, VII) Nothing of these. Everything is scattered-like in these two. Seems to me they're just compared to each other—painter was just looking . . . (etc.). Nothing stabilizes one another—too drab—they were trying to put over an idea that isn't there; man has an idea and doesn't put it across . . . (E didn't get all of this.)

Case 4

Two years prior to psychological testing this 31-year-old male had been operated on for a benign brain tumor, necessitating the removal of most of the left frontal lobe. The patient was right handed, and an effort was made to leave speech areas as intact as possible. Prior to development of the tumor the patient had been quite an adequate individual, although he came from a broken home and did not have an emotionally secure childhood. He had completed four

years of college and had been a commissioned officer in the Army, where his record was unusually good.

At the time of testing the patient's main symptoms were as follows: (1) Seizures, which began prior to discovery of the tumor and continued following surgery. (2) Easy fatiguability following physical or mental effort. (3) Moderately increased emotional lability. (4) Depression, which seemed related both to insight into the changes within himself resulting from the tumor and to rejection by his wife, who resented the patient's reduction in earning capacity and increasing dependence upon her. Insight was quite good, and the patient was able to respond rather well to supportive psychotherapy.

The patient's Wechsler-Bellevue, Form I, scores are as follows:

	WT. S.		WT. S.
Information	13	Picture Arrangement	15
Comprehension	16	Picture Completion	13
Digit Span	16	Block Design	14
Arithmetic	15	Object Assembly	15
Similarities	15	Digit Symbol	7
Vocabulary	14		
Verbal IQ	134	Performance IQ	124
Full Scale IQ 131			

It can be seen readily that the only score suggestive of brain damage is the lowered Digit Symbol, which probably reflects both depression and fatigue here. He was able to give nine digits forward and to reverse seven on the Digit Span, suggesting that memory for the symbols or difficulty in shifting were not the leading impairing factors on the Digit Symbol. His performance on other visual-motor tasks, including the Bender Gestalt drawings, did not show any evidence of difficulty in hand-eye coordination.

His responses to the first five Rorschach cards are presented here to illustrate the marked emotional effects that the tumor and consequent surgery had on the patient. Although he was without any striking intellectual loss as measured by a formal intelligence test,

in his own subjective feelings he had suffered serious loss (see particularly Card IV, 3 and 4). Responses of this kind which reveal feelings of being physically damaged or abnormal are relatively common in the records of patients who are aware of having brain damage, particularly when the intellectual resources are still good and considerable insight is present.

Rorschach Protocol, Case 4

CARD I

PERFORMANCE

20"

1. Reminds me of a large view of three vertebrae.

W Fk At

2. On first glance it reminded me of a bat. These things reminded me of a bat in flight, also the central section.

W FM A P

3. Reminds me of an insect because of this central portion up here. I don't know what kind because it's too confused. These things remind me of antennae. This part reminds me of an insect tail, anus. Center part the body.

D FM, Fc A

4'

INQUIRY

1. Three vertebrae and the hooks on the vertebrae. The open spaces helped form the concept also. They reminded me of an X ray through the light and dark portions of area here.

2. The outer area reminded me of webbing. The top center reminded me of head area, legs. (What gave the impression of flight?) The shape of the blot at first glance.

3. The distribution of the abdomen and foreparts, these could be antennae or feet. This is where the body changed from forepart to hindpart. The apparent transparency of the sides. Of course this is just a plain ass hole (laughs). The central portion seems to be reaching out as if to grab me.

CARD II

PERFORMANCE

30"

I'm interested in medicine—that's why I saw the vertebrae.

1. This thing some way or other reminds me of a crab. Reminds me of claws, red. The tail reminds me of a crab

INQUIRY

1. The color influenced me in the first place, it being the color of a boiled crab. The shape of these things could

also. Color being the predominant feature in that attitude.

W FC A

3'

CARD III

PERFORMANCE

5"

1. It reminds me of an old country square dance, these people being figures in the dance and holding something in their hands. That does not fit into a square dance.

W M H P

2. Each of these things reminds me of a foetus.

D FC Foetus

3. This is the hip bones, flat hip bones.

D F/C At

4. The faces of the people aren't true and it reminds me of a square dance among bugs. The slit which represents the eye seems to be too close to be human, and the beak doesn't resemble a human enough. The figures seem to be drawing away from each other.

W M A

- (2) The long red streaks here remind me of the umbilical cord of the foetus.

3' 20"

be pincers of a large crab. (Top red) The bottom red area reminded me of a crab also, the spines sticking out here and its general color.

INQUIRY

1. The position of the figures seem to be rocking back and forth as in a square dance. The black parts only remind me of that. The large appendages remind me of something in their hands. (What?) I don't know.

2. Their position, color, and general outline and also there could be some of the womb coming out with the child.

3. The general shape. Again I go back to the colors on medical drawings. Color was the first thing that reminded me of that.

4. If pinned down, I would say that they were bugs dancing. Also there seem to be hoofs such as you'd find on a horse.

- (2) The red color starts me thinking in medical lines and I go on from there to the shape.

CARD IV

PERFORMANCE

5"

1. On first glance it reminds me of a toad which has just jumped.

W FM A

2. This brings to mind the photographic angle when you take a person near their feet. Their feet seem unusually large. These remind me of shoes. These of arms of a human being.

W M H

3. This reminds me of a person whose head hasn't been completely formed or encased in bone; that is, the brain exposed.

W F H

4. A human being in the act of jumping, arms, toes out, knees bent. The arms remind me of an extremity which has just been mangled or broken.

W M, mF H

4'

CARD V

PERFORMANCE

2"

1. Reminds me of a butterfly, these the wings in flight, headed up. Antennae.

W FM A P

75"

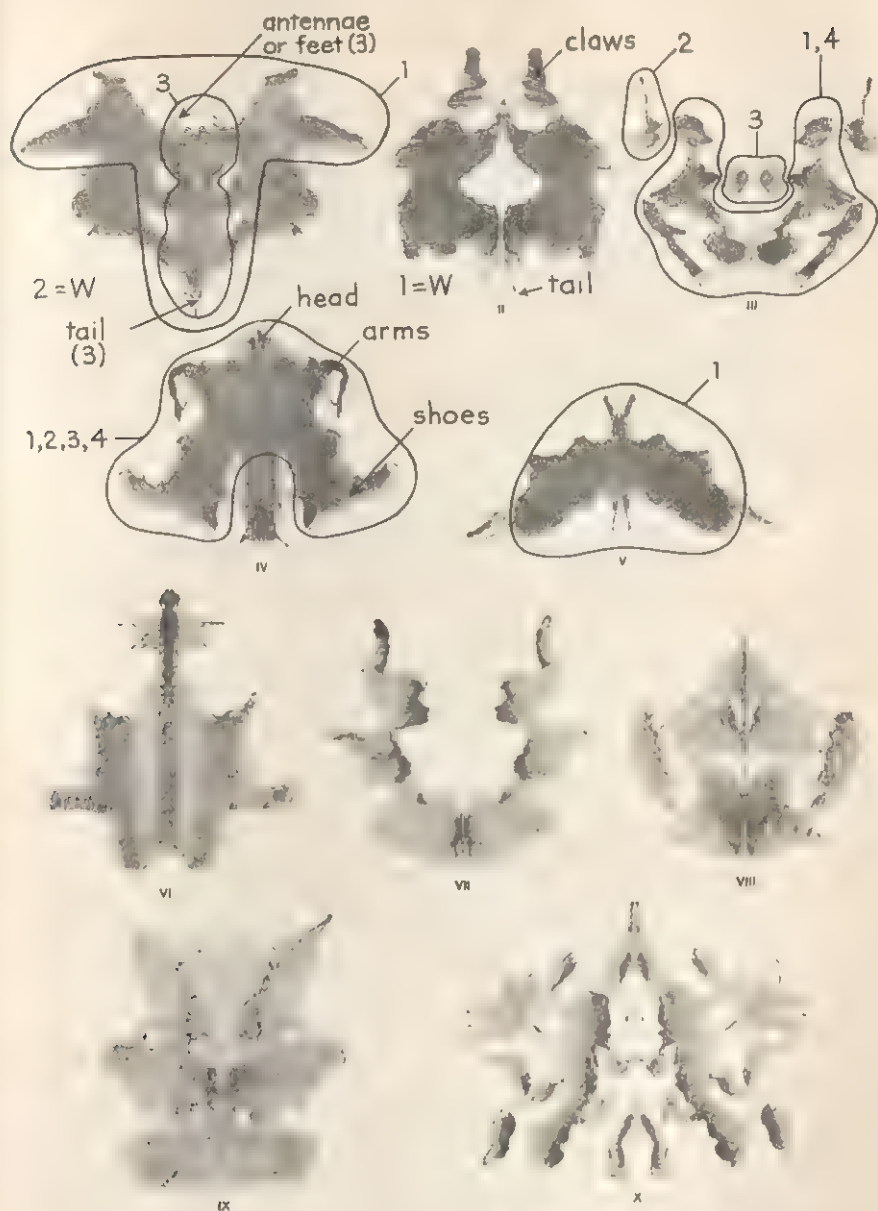
INQUIRY

1. I used all of it except the tail bone. (Can you point out the parts?) No, I couldn't. These are his feet, arms flung out as if he just jumped, legs extended. (Head?) This (top center) I took for his head.

2. The whole person is laying down and you take a photo from the feet end. (What about the blot resembles a person?) The feet, the large leg, general attitude of arms; the person is asleep. He has a large collar over which the face is just protruding. (Shoes?) The heel and the turned up toe, just the general shape.

3. I see all of the person but the head isn't completely formed, not formed completely in growth.

4. Portion of knees bent. Just jumped out of mud, it's dripping from his shoes. This heel appears to have been improperly put on. It's extended under the arch for no apparent reason.



CASE 4 Location Chart

Case 5

The toxic psychoses belong in the category of organic states. In these conditions, brain damage usually is not permanent, and the condition generally clears up following removal of the toxic agent. Thorough treatment of this topic has been made recently by Cohen.* For adequate medical management it is necessary to determine as quickly as possible whether the psychosis is of toxic or functional origin, and psychological tests can be of value in helping to make this distinction. Because of the diagnostic difficulties presented by these cases it seems worthwhile to include an example of such a Rorschach here.

The 58-year-old farmer whose Rorschach is presented here came into the hospital after being picked up on the street following a convulsion. He had suffered from heart disease for several years and at time of admission was in a state of heart failure. He had been on digitalis but had stopped taking it about two weeks before. He denied being a recent drinker. Clinically he pursued a course of toxic psychosis, with his mental condition improving as his heart condition improved. The medical assumption regarding cause of psychosis was that it was due to cerebral anoxia resulting from reduced blood flow in an edematous brain. The patient lost 40 pounds in weight as a generalized edema cleared up under treatment for his heart condition. A second Rorschach, administered one month following the Rorschach shown here, revealed considerable test evidence of clearing of the psychosis which paralleled closely the clinical impression that his mental symptoms were in partial remission.

When seen for the first Rorschach (which is given here) the patient was in an acute confusional state. He was found in his room sitting in the middle of his bed busily washing his hands with water which he poured from a paper cup. Occasionally he poured the water over his head or over his edematous legs and feet, exclaiming while rubbing it in that it was "good treatment." He was euphoric and

* Sidney Cohen, "The Toxic Psychoses and Allied States," *Am. J. Med.*, 1953, 15, 813-828.

friendly and upon occasion would tease the examiner with threats to damage the test material (see protocol). Remarks were sometimes accompanied by hearty or uncontrollable laughter. Testing was made difficult because of his erratic behavior, but he did not voice any definite resistance to taking the tests.

The particular quality of this Rorschach record that probably stands out the most prominently in distinguishing it from other organic records is the combination of facetiousness and weakened control of aggression and emotions. This sort of symptomatology will be recognized readily by most readers as characteristic of the more familiar states of intoxication due to alcohol. Examples from the protocol reveal a preoccupation with violence, toward which he takes a facetious attitude: Card IV, 2, remark to inquiry question to describe his "waterfall" concept, "Well if you want me to pour water on it I will." Card III, 1, remark about choking the examiner with his tie. Card V, 2, remark, "If I had a pair of scissors I'd cut you out a butterfly." Card VI, 2, the "bump-head" concept.

In addition to the above behavior there appears a false carelessness or indifference, which is merely a manifestation of feelings of perplexity and impotence characteristic of the organically damaged patient. For example, note such remarks as these: "Just the way you look at it." "What difference does it make?" "Could be a bunch of ink." "Could resemble a lot of things." "Fella could fix that so it would just be a white card." These remarks reveal not only hostility but also his distrust of his own ability to deal with the blots. The fact that the form level of his specifications far exceeds his capacity to recognize that the quality of most of his responses is quite adequate suggests that the impaired state is still reversible. Other signs of perplexity due to the unstable confusional state include the frequent turning of the cards; the approach to Card II; the remark, "If it flashed out in front of you it'd be something different"; and frequent references to the need to use one's imagination.

Other signs favoring an organic syndrome are: (1) Failure to see the usual *M*, and organizational difficulties, on Card III. (2) Time disorientation and immediate memory disturbance (Cards III, 2, and IV, 1, Inquiry). (3) Frequent references back to preceding re-

sponses. (4) Onset of fatigue made obvious by worsened performance on Cards IX and X. (5) Tendency to refer to past experience, which is very mild (Cards VIII, 3 and IX, 1, Inquiry). Of course, it is the appearance of all of these signs together, rather than any one of them taken alone, that lends them their significance.

The patient's basically compulsive personality is revealed by the Rorschach in his tendency to see "faces" on the cards and probably also by the fairly high level of hostility for which control was loosened as his rigid defenses gave way due to the toxic condition. The further breakdown of the compulsive defenses as fatigue adds to his difficulties is revealed in the comment on Card IX, 1: "See faces and lots of little things. What's the use of going into it?" Of course, the nature of his basic personality had already been suggested by the hand-washing behavior, over which he had little control during the height of his intoxication but which disappeared as the psychosis cleared up.

It seems possible that the severity of the toxic psychosis in this case was at least partly due to the sort of basic personality this patient had. He probably did not have the flexibility of defenses to help him tolerate the severe physical stress resulting from his condition. When seen for testing one month later, although he was much less psychotic he was in a highly irritable state and requested that he not be pressed too far in obtaining the Rorschach inquiry. He said, "You don't want me to get mad, do you?"

Rorschach Protocol, Case 5

(Note: All cards were constantly turned in all directions.)

CARD I

PERFORMANCE

2"

1. Well, that could be a bat.

W FC' A P

Could be a lot of things.

INQUIRY

1. Well, when it first flashed up. (How much of blot?) All of it.

Add. 1: V Looking at it again could be part of the human body.

Could be just a bunch of ink. (Body?)
Here, this could be the human body.

'Course I don't know how the doctors spread them out. Could be the navel. Head. (Head?) Head should be up here. (Concept of human has no head.) I don't know what that mark could be. Could be where they open them up. (Center line.)

V D F H

2. Could be a map.

d, S F Geo

I could see a lot of things.

3. I could see faces.

(Rejected)

Would that be enough?

1'

CARD II

PERFORMANCE

5"

1. Well, I wouldn't know what that was. A little red and black. Well, that could be a lot of things. What do *you* see there?

W Cn Des

INQUIRY

1. (See something more definite this time?)

Add. 1: Well, that could be animals.

D F A P

Add. 2: That could be a cow.

dr F Ad

That red spot is out of place. 'Course the ears aren't quite right. (Refers to Add. 1.) (Blot?) I don't know. Funny looking cow (Add. 2). (Where?) Here. (Blot?) Oh, it's the way you look at it.

PERFORMANCE (*continued*)

2. Could see faces.

d F Hd

- (1) Oh, quite a little . . . could be anything. Red and black. Red mixed with black. Oh, it's just the way you look at it. Oh, you can see quite a little there.

1' 30"

CARD III

PERFORMANCE

10"

1. V Well, that could be a bow tie.

V D F Obj P

2. This here, I could see faces.

D F Hd

3. This could be a hand.

INQUIRY (*continued*)

Add. 3: Still could be part of the human body. (Parts?) That could be the lower part. (Laughs.) (Lower red)

D F At

Or it could be a horse, or a camel's head. (Refers to *Add. 2.*)

2. (Faces?) Chin out and no teeth—like Popeye.

Add. 4: Part of a face—nose, eye, here kinda messed up.

d F Hd

Could be a white card.

INQUIRY

1. (?) Well, at first glance it looks like a bow tie. That's the way they're tied. Fellas wear bow ties and you could choke them with it. Now you take your tie—of course, I don't know how you tied it, but a guy could come along and choke you with it. Depends how it's tied. (Laughs.)

2. (Faces?) Just the way you look at it. We went through that this morning. (Patient was disoriented in time. He was referring to the Performance Proper, which occurred within the past hour. This was an afternoon session. He was given the Wechsler-Bellevue in the morning.) Well, when was it—yesterday?

3. That could be a hand there. Depends how you hold it. I can't explain it.

d F Hd

I don't know what this could be sticking out here though. (Lower projections on "legs.") That could be faces. (Same as No. 2)

2'

CARD IV

PERFORMANCE

10"

That's kinda repeating itself, isn't it?

1. That could be faces. Could be lots of things.

d F Hd

Could be faces.

Could be a nose. (Part of face.)

2. Could be a stream of water coming down.

dr mF N

3. Could be feet coming down there. Funny looking feet but there could be.

D F Hd

4. Could look like anything. Could look like some weird animal.

D F Ad

Lots of ways of looking at it.

45"

INQUIRY

(Shape?) Well, not exactly the shape. It could be a hand. You can hold a hand so it's pointed. (Subject seemed to interpret "shape" as meaning "good form.")

1. (Faces?) Didn't you get that down this morning? (Laughs very hard for nearly a minute.) Just the way you look at it. There's a face there. Could be a white card. (Parts of faces?) Naturally, a face would have to have a nose. (Puts card down and talks of people—specifically of a woman he once saw—who have their noses "eaten off" by syphilis.)

2. That could be a stream of water. Might be Horse Tail Falls. (How see it?) Well, if you want me to pour water on it I will.

4. That could be part of an animal there. See? Two eyes.

3. That could be feet. I don't know whose feet.

Add. 1: That could be a swan, a duck, or a goose. Just the way you look at it.

d F A

4. (Animal?) Got eyes, nose. Could be pop-eyed. Could be lot of things.

CARD V

PERFORMANCE

1"

1. Well, first glance makes you think of a bat. No, ears too long. Well, makes you think of a bat.

W F A P

2. Could be a butterfly, maybe.

W F A P

Oh, I can see quite a few little things there.

Fella could fix that so it would just be a white card. (Covers blot with hand.) See there?

1'

CARD VI

PERFORMANCE

25"

1. Well, that could be part of a man. Down here. Looks like a pair of testicles. 'Course the head's missing.

d F Sex

2. Looks like his hair is parted in the middle. Looks like he lit on his head. He could be a "bump-head." Looks like somebody hit him. He might have got a permanent part.

d→D F H

INQUIRY

1. Well, I'd cut it off around here. (Talks of hooks on bat wings.) Just the way you look at it.

2. (Same?) Oh, no, you'd have to shape it a little bit. I don't remember how a butterfly looks exactly. If I had a pair of scissors I'd cut you out a butterfly. (Laughs.)

Add. 1: There'd be a face. Hair down there. Maybe the wind's blowing. You can see the whites of his eyes. (Laughs.)

d F,m Hd

INQUIRY

Add. 1: Could be a waterfall.

D mF N

Add. 2: Could be a map. Could be part of the United States. Could be Florida.

dr F Geo

2. Could see the mouth. Could have his head parted in the middle. Could have two knots up there. Somebody might have hit him. This could be something tied around his neck.

Add. 3: √ This could be a dog. (Dog?) I don't know. That resembles a dog's head. It ain't perfect.

V d F Ad

1. (Part of man?) That could be a man's body.

CARD VII

PERFORMANCE

85"

(At 25 seconds) Well . . .

(At 70 seconds) Oh, I don't know.

Just the way you look at it.

1. (At 85 seconds) It could be . . . oh, a map. Just the way you look at it.

D F Geo

That way it could be just a white card.
(Covers blot with hand.)

1'45"

INQUIRY

Add. 1: Well, I see a couple faces.
Looks like they have their hair done up.

D F Hd

Add. 2: Down here looks like the
lower part of the body.

D F Sex

(Hair?) Well, you've got to use your
imagination a little. It's all in your
head. It's all in the way you look at it.

1. (Map?) Just the way you look at it.

CARD VIII

PERFORMANCE

7"

1. Well, that could be some kind of pink animal. I never got drunk enough to see pink elephants. Never got the D. T.'s

D $F \leftrightarrow C$ (?) A $\rightarrow P$

2. That there could be part of the spinal column. I don't know too much about it.

D F At

3. That way could . . . might be the lungs. Could be the . . .

D FC At

Could be just a white card.
As far as lungs, I'm no doctor.

1'20"

INQUIRY

1. Same place. Everything's about the same. I don't know what kind of animal. (Blot?) Just the way you look at it. Your imagination, you've got to use your imagination.

2. Right in there. Same place it was this morning. (Blot?) Well, just first glance. I don't know, it just does to me. It might not be perfect. You've got to use some imagination.

3. These could be lungs here—kinda pink. (Blot?) Just the way you look at it. (Lungs if black?) No, they wouldn't resemble lungs if they were black. It's the color of it. They look like fairly healthy lungs. (Tells of experience with animals and of seeing animal lungs on farm and ranch.)

CARD IX

PERFORMANCE

5"

1. Oh, you can see lot of little things. See faces and lots of little things. What's the use of going into it?

D FC Hd

Could be a white card.

Well, I guess I got that fingerprinted pretty good. (Laughs, referring to wet finger-marks.)

30"

INQUIRY

1. Well, there's a perfect head of a man. Could have a droopy mustache. He has a red face. Could have sunburn. Could be baldheaded. (Blot?) Well, you've got to use a lot of imagination.

If you glance at it in the street it'd be a white card with a bunch of color on it. I never was much for picking up paper on the street.

I could see a lot of things if I had the time. My eyes hurt. Too much white. Needs more color. (The patient was referring to the white hospital clothes and bed sheets, which he said caused too much glare and hurt his eyes.)

CARD X

PERFORMANCE

5"

1. Well, that could be part of the human body.

D F Hd

2. Could be flowers. Could be lot of things.

D CF Pl

- (1) Yeah, could be part of . . . could represent the human body.

I don't know . . . I see a lot of different things there. Just the way you look at it.

INQUIRY

1. That could be. Lower part. Use your imagination. (?) I don't know, you've got to use your imagination.
Add. 1: That could be the wish-bone of a chicken or a turkey. Could be a lot of things. (?) Just the way you look at it.

D F Aobj

2. As I said this morning that could be flowers. Or yesterday . . . or, I don't know. I don't even know what time it is.
Add. 2: Could be . . . you've seen these "spin-arounders"—that could be one of them.

D F Obj

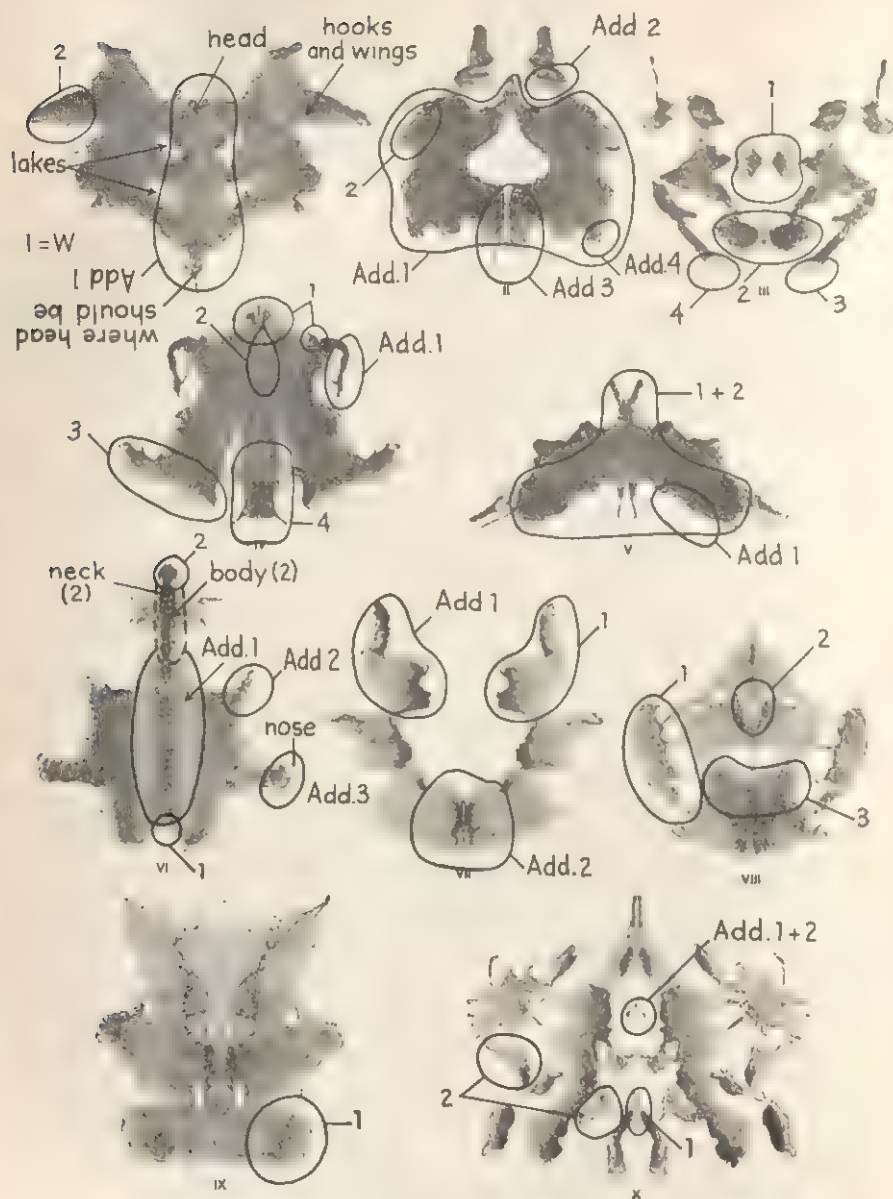
- (2) That flower there—I've seen all the flowers there are.
- (1) Could be part of the human body.
- 1' 15"
- (2) (Flowers?) Well, you've got to use your imagination. (Areas?) All this yellow here could be flowers. (Would they be flowers if they were black?) Well, no. I've seen black flowers; there are certain kinds. The color. (Talks of flowers.)

Case 6

This is a 36-year-old man who had had good health except for an episode of rheumatic fever eight years prior to this hospitalization. About a month before coming into the hospital the patient had three seizures, which occurred during sleep and were followed by several hours of unconsciousness. The reason for referring the patient for testing was stated as follows: "Diagnostic aid, especially with reference to possible brain tumor." When he was seen for testing the patient's illness was still undiagnosed, and he was very resistant to accepting the fact that something might be seriously wrong with him. He was worried about his business and moderately depressed by his situation, particularly since he had certain symptoms, such as blurring of vision, which made it impossible for him to deny his illness. The final diagnosis, made two months later following thorough observation and study, was that the patient suffered from a sub-cortical vascular lesion, probably in the region of the caudate nucleus and due to rheumatic brain disease.

In this case the Wechsler-Bellevue test yields much more conspicuous evidence for the organic process than the Rorschach. The scores are given on page 419.

His general performance was highly characteristic of patients with mild to moderate brain damage. For example, he reversed only four digits, although he could give eight forward (the latter might be expected from his intellectual level). He was greatly slowed up on the visual-motor tests, although qualitatively he could succeed on them with little exception: He could do all the block designs and received credit on all but the last one, but he got time bonuses on only the first and fifth. The fifth design is often found easier by organics be-



CASE 5 Location Chart

	WT. S.		WT. S.
Information	14	Picture Arrangement	7
Comprehension	15	Picture Completion	9
Digit Span	10	Block Design	10
Arithmetic	15	Object Assembly	8
Similarities	14	Digit Symbol	6
Vocabulary	16		
Verbal IQ	128	Performance IQ	97

Full Scale IQ 114

cause, once the idea of making the stripe is grasped, there is less necessity to follow the pattern. Like most organics with visual-motor difficulty, he found the Picture Arrangement difficult; but he was not bizarre and got the point to the stories in the last two arrangements, although he did not get any credit for the manner in which he placed the pictures. Digit Symbol frequently is the lowest score with these patients, as it is here, and in spite of his slowness and high verbal intelligence he even made one error. He complained of difficulty in shifting from the key to the task on this test, saying he got confused as to whether he should concentrate on the number or the symbol.

This patient's Rorschach is selected as an example for several reasons: In the first place, this case represents a reverse of the problem in Case 2, in which a relatively well-preserved Wechsler was accompanied by a poorly-seen Rorschach. To what extent the difference between the tests on the two cases is due to differences in disease or to differences in the basic personality of the two men it is not possible to say at this state of our knowledge. Case 6 was more of an "intellectual," however, and possibly had better emotional control over expression of his intelligence, although actually it had been more disrupted. Next, the lesion was fairly well established as subcortical and not yet severe. Finally, this is the sort of Rorschach which, if subjected to "blind analysis," without being accompanied by the Wechsler, might not be regarded as the production of a brain damaged patient.

However, if an observer scrutinizes the protocol carefully, he finds that it has many features in common with foregoing records:

1. A very mild, barely perceptible perplexity is revealed by the poor production at the start, followed by improvement as he goes along, especially as he gets to the inquiry.
2. He is careful to be accurate (See careful specification on Cards I, Add. 1; IV, 1, Inquiry; V; VI, 1; VII; X, 1, 2, 3).
3. Anxiety, emotional lability, and extreme insecurity are elicited by Card II, where he gives the customary theme concerning war and violence, making use of the red color.
4. Mild paranoid signs appear in such content as "spirits," "symbolic" ideas, and feelings that something is concealed, or suspiciousness, as represented by the "Ku Klux Klan" and "mask" responses (Card I, Add. 2; II; IV, 2).
5. The appearance of a tendency to select small details projecting out from the blots and then to build up a concept from them (the fact that he is first attracted to the outer projections probably being the important diagnostic clue here. See Cards I, 1; I, Add. 3 and II, these being the occasions where he actually describes building his concepts in this way).
6. Passive and pleasant colored responses on the multicolored cards, suggesting that emotional control is good most of the time, although he is very concerned about it, as revealed by his response to Card II.
7. Signs of objectivity about the blots, such as appropriate jokes or making fun of the cards (see IV, 1 and VII, 3).

While some of these signs do not seem very significant when taken alone, the occurrence of all of them together in one record should lead to hesitation to regard the evidence of emotional disturbance in this case as of purely psychogenic origin. And although, on the other hand, the psychologist doing blind analysis might have some reluctance to state positively that brain damage is present, he should at least raise the question. If he has any responsibility for the patient's welfare, he should recommend that the patient be studied neurologically until the question regarding brain damage has been answered.

Rorschach Protocol, Case 6

CARD I

PERFORMANCE

13" ☉

1. ✓ Reminds me somewhat of a crab.

✓ W F A

2. ✓ And might be the hip bone of a skeleton.

✓ W F At

40"

INQUIRY

1. Just the general outline. (What in particular makes it look like a crab?) In fact in my mind I first saw that (usual claws), and then began to notice those other things.

2. Is that the one I said looked like a hip bone? Here's the socket in here and the vertebrae up here and the flat bones. (Only the shape?) That's about all if you use this as the vertebrae.

Add. 1: ✓ This gives me the impression of a Chinese idol and its surroundings, an altar or whatever they use. (Parts?) Sort of a kneeling Buddha type of figure. (Outline?) Just the general shape of it. Don't the Chinese go in for double images like that, identical on each side? (Which way?) Facing this way. (What would this be?) That's just surroundings—ornamentation or . . .

✓ D→W M H

Add. 2: I could see what might be the figures of people, spirits or something. (Can you show me?) Just an impression. (Parts?) Head, peaked hat, some impression of face, and wings here—and wings flying back here in space.

D M (H)

Add. 3: A couple of hands rising upward. (Do the hands have anything to do with the spirits?) No. And a couple of women's breasts there, and that could be the rest of the body down there. She's leaning over back-

INQUIRY (*continued*)

ward with her hands up there. (Hands in relation to the women?) I saw the hands, then the busts, then fitted them together. She's bending over backward like this (gestures). (Anything else?) Sort of a thin hoop skirt down here, out over her hips and legs.

D M, Fc H

CARD II

PERFORMANCE

31"

1. I got the idea of a couple of hooded figures holding up something together, a toast. If you wanted to go a step further, the red would symbolize fighting, killing, war, or something.

W M, Csym → CF Abs → Blood, Fire

1' 34"

INQUIRY

1. Here are your figures, hooded, holding up a torch or something here. That could be flames, war, and this could be blood. (In relation to the figures?) I was just building up a story, first thought of Ku Klux Klan, and the red was symbolic of violence, the hooded figures here holding up a torch in a sort of toast to violence. (Hooded?) The bulky outlines, and head doesn't show clearly.

CARD III

PERFORMANCE

17"

1. Looks like a couple of characters in it pulling at something or—I get the impression of somebody working or talking. As far as the red blots are concerned, they don't send me. (Comment?) This part here could be a clothes basket that they're holding or something. Is the idea just to let your imagination go? To see whatever you can?

W M H P

1' 5"

INQUIRY

1. Somebody working and talking, as though hanging clothes or something like that. (Parts?) Heads, body, legs, bending, throwing hips backward and leaning forward. (Men or women?) Got the impression of men but personally I don't like to hang clothes. (Basket?) Just this here.

CARD IV

PERFORMANCE

1' 7"

(Looks at back of card.)

1. Maybe it's a professional wrestler.
That was just a facetious remark.

W M H

2. I can see a mask like a gargoyle out of
the Mardi Gras or something.

d F Mask

- (1) These give the impression of feet like
something sitting there leaning back
in a corner or something.

2'

INQUIRY

1. I got the impression of a wrestler sitting in the corner (postures). (Just the shape?) The over-all impression. (Anything else?) Perhaps the face in here, though it doesn't tie in with the design or the face isn't in the right proportion. This is seen from the feet perspective.

2. Just this in here, the slanting eyes and indistinct facial features, just like a Mardi Gras mask.

Add. 1: This actually looks like somebody's shoe there, with heels on it. (How do you see it?) Just that by itself. (Part of the man?) No, just a shoe.

D F Obj

Add. 2: Another thing I got was an impression of a picture of a man taken with a wide angle lens, distorting the near part and decreasing the far part.

W F H

CARD V

PERFORMANCE

9"

1. First thing I thought of was a bat.
Some kind of wings; an insect or a moth.

W F A P

36"

INQUIRY

1. General shape and antennae or ear. Strongest impression is of a bat, though. (How do you see it here?) Just like a plane view or a drawing of it like in a dictionary or something. Or it could be a moth. (How do you see the moth?) About the same way. So many double images like that would remind you of a bat or a moth, or insects like that in nature. (Could it be both?) Could be any winged insect or animal.

CARD VI

PERFORMANCE

44"

1. I get the impression of a skin of the animal but I don't know why. This could be a tail skinned out too, but I won't be too literal about it.

W Fc Aobj P

1' 26"

INQUIRY

1. The general contour, the legs and the tail, only this part bothered me out here on the tail. It looks like the inside of a pelt that hasn't been completely fleshed out yet. (Did you use this part?) I don't know how that would fit in.

CARD VII

PERFORMANCE

1' 20"

There are a thousand different ways you could interpret that one. (Just give me some of them.)

1. Here's a bird, or . . .

dd FM A

2. A squirrel on a stub or a nest.

D FM, Fc A

3. A couple of guys with a feather stuck in their hat, pointing in opposite directions.

D M H

(Fine. Any more?) No, that's about all I can think of.

2' 47"

INQUIRY

1. (Which does it look more like?) Almost like a parrot here, with a little topknot here and head curled down, sitting up there.
2. Just see the squirrel back here on a stub—don't see the bottom, just the back with the tail sticking up here. (What makes it look like a squirrel?) The bushy tail and fur on the back.
3. (Show me.) Head there, with feather there pointing out in opposite directions—"He went that-a-way." (Feather?) Just the shape and the location.
 ☺
Add. 1: √ Here you get a definite figure of a girl in a skirt with boots and a parka. She's running or jumping. That's a better drawing of that than I could make. I know! They're jumping out of the way of falling snow here. All dressed up warm.

V W M,m H

CARD VIII

PERFORMANCE

25"

1. First impression was of an abalone shell, because of the color and the shape of it.

W FC A

②

2. > That's about the closest thing to an animal I've seen yet, like a marten or a coon.

> D FM A P

1' 29"

INQUIRY

1. Just mainly through color and general contour. (Anything else?) The irregular round shape of an abalone.

2. And two very normal looking animals. (How do you see them?) As if stepping over something, hind leg stuck way back, eyes, ears, and nose there. That's quite an imprint or impression.
Add. 1: These center lines I always get an impression of a vertebrae for some reason or another. (How much of it did you use?) No definite boundary—just the impression on both sides, and that would be a hip bone right there, those flat pelvic bones out here.

dr F At

CARD IX

PERFORMANCE

1' ©

1. Doesn't have much of an impression. Here I can see a Southwesterner with a peaked hat and field glasses and a horn. The colors don't seem to mean anything.

D M H (O)

1' 50"

INQUIRY

1. Maybe an old seafaring man with oilskins, with field glass or horn or something. (Oilskins?) Rainproof or waterproof overcoat. (What about the blot suggests that?) Just the general bulkiness of the shape.

CARD X

PERFORMANCE

56" ☉

Any way I want to turn it?

(Apparently saw examiner making ☉ sign.)

1. √ No particular impression, but I did think of a man coming down in a parachute.

√ D M,m H O

2. 7 Map of South America, seen at a slant.

7 D F Geo

3. Backwater from a dam where water follows contour of the land.

D CF N

2' 34"

INQUIRY

1. I saw a show last night, maybe that's why I thought of it. "Red Skies of Montana." Fire fighters. (Can you show me?) Well, the shrouds are a little heavy. Could be a man hanging from a tree by parachute. (Man?) Right in through here.

2. And a perspective view of map of South America. (Perspective?) Like a painting on a globe where you see it on an angle. (What about the blot suggests its being on a globe?) Just the general way it is shaped. You'd have to have a map here to see what I mean. (Does it look curved?) No, just the angle you look at it, makes it that shape.

3. (What reminded you?) Perhaps its color and the fact that it has such a spidery shape. Normally a lake doesn't have a rough contour, only when backed up in a rugged river channel.

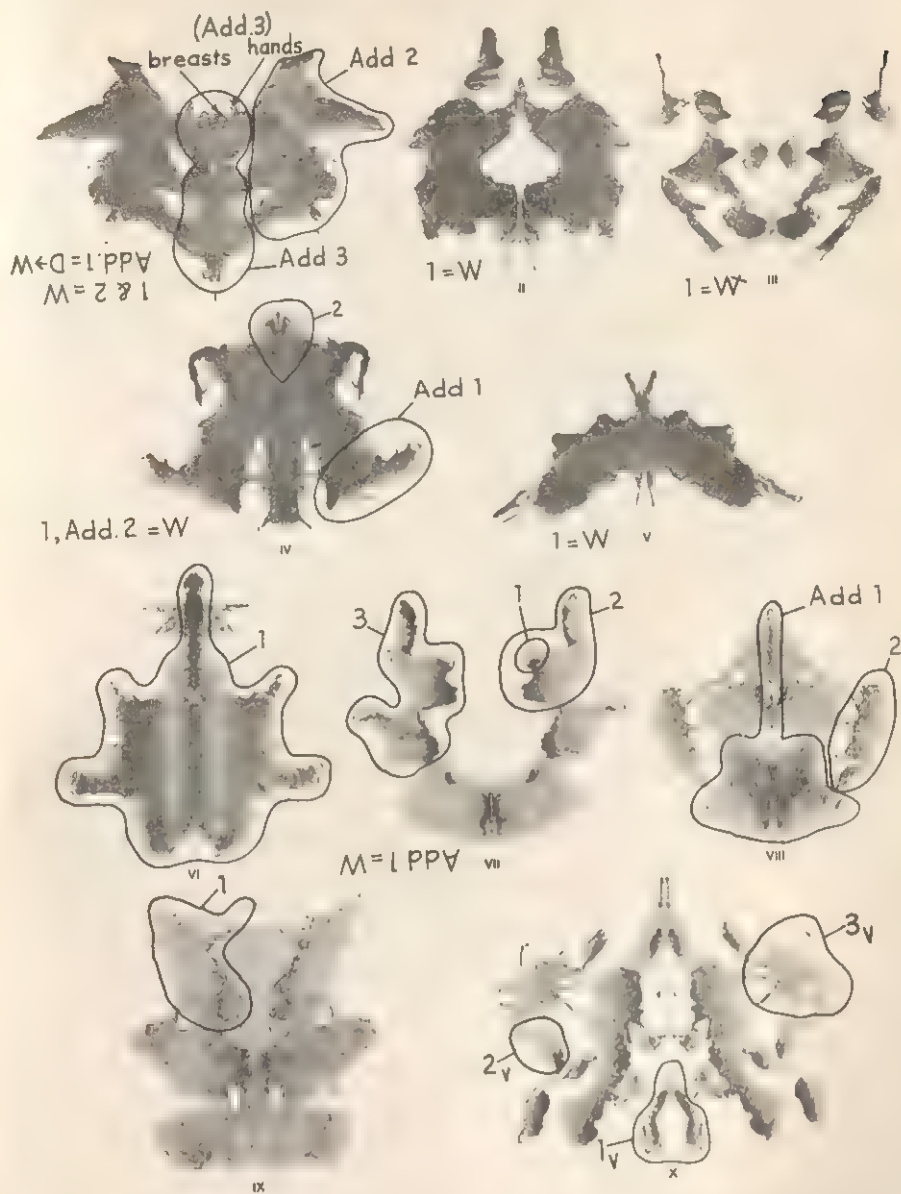
Testing the Limits

(Can you find any other animal skins?)

S: No, nowhere else.

(Subject is tested for populars.)

S: (Worm, Card X) Just one of these green things here, is that where they get the impression? (Rabbit's head, Card X) Yeah, right there. My little man upside down. (Bear, Card II) Yes, I can, here's hind legs, haunch, head right there.



CASE 6- Location Chart

(Subject is asked which card he likes best.)

S: (Card VII) This one. Gives clearest impression of the girls, quite a trim figure!

(Subject is asked which card he likes least.)

S: (Card IV) Probably this, though there are some things there that can be recognized; I can't make too much of it.

(Subject is asked to use various portions.)

S: (Top VI) No, I can't seem to do anything with it. (Bottom VII) Looks almost like somebody's cheeks, bent over that is. (Bottom VI) No, nothing there; those little balls might be bits of flesh or fat.

(Subject is asked if he can find anything that looks like human genitals.)

S: That (Card VII) could be, could be a woman. (Can you find a man's sex organ?) No. (Top *D* on Card VI?) Oh, yeah, that could be. I never thought of it though.

Part Three

Social Psychology, Anthropology, and Industrial Psychology

- CHAPTER 13 The Rorschach Technique in Social Psychology
- CHAPTER 14 The Rorschach Technique in Personality and Culture Studies
- CHAPTER 15 The Rorschach Technique in Industrial Psychology
- CHAPTER 16 Top Management and the Rorschach Technique



The Rorschach Technique in Social Psychology

It is a curious fact in the history of the Rorschach that most social scientists have demonstrated a marked lack of interest in its use. Although the Rorschach has been shown to be an effective instrument for obtaining significant data about the relations between culture and personality (see Chapter 14) and a method that can cut across socio-economic and societal differences, the available data have been accumulated by only a handful of anthropologists and a half-dozen others, largely clinicians.

What are the reasons for this lack of interest? Among the many possible considerations may be the long and intensive training required for acquiring the techniques of administration and interpretation, the emphasis upon individual rather than group characteristics, the "clinical" (that is, "pathological") aura surrounding the technique, and the difficult and uncertain problems of reliability and validity of the instrument. All of these are imposing barriers to the traditionally trained social scientist. But perhaps the greatest stumbling block has been the presence of a particular theoretical frame of reference in the interpretation of Rorschach protocols—the psychoanalytic. It is possible, of course, to use the Rorschach in dealing with the problems of social science without adopting an analytic frame of reference. Much of the research to be reported in this chapter was so oriented. It remains true, however, that the

richest and best-predicting interpretations come from psychoanalytically-oriented Rorschachers. This is not surprising since analytic hypotheses have been the only ones systematically applied to content interpretation. Projective material, by definition, requires an organized set of concepts in order to make meaningful interpretations.

In view of these considerations, it appears that the Rorschach will not be used increasingly by social scientists until the latter feel that psychoanalytic hypotheses are worthy of consideration. There are signs that this is coming to be the case—at least in the more psychological areas of social science.

Talcott Parsons, in his presidential address to the American Sociological Society, notes that “. . . the possibilities of the use of projective techniques in *sociological* research are definitely exciting.” [24, *italics in original*]

This chapter will be in two parts. The first section will be concerned with a summary of published research, and the second section will be an outline of some areas in social psychological and social scientific research where the Rorschach might be a profitable technique.

Published Research

Studies of Prejudice

The understanding and elimination of ethnic group prejudice have long been important problems in social science, but only recently have the deeper psychological bases of prejudice been investigated. Frenkel-Brunswik and Sanford [8] studied the personalities of “highs” and “lows” in anti-Semitism among college students, using the Rorschach, TAT, case history, and interview techniques. The Rorschach results were as follows:

The “highs” on anti-Semitism in both sexes, as compared with the “lows,” tended to be intellectually underproductive, somewhat lower in intelligence, and lacking in creative imagination. They were less interested in human beings as individuals and showed a higher tendency to have hypochondriacal complaints and conversion symptoms.

It was felt that their aggressive attitude toward out-group figures might stem from frustrations (mainly at the hands of mother-figures) in childhood. These frustrations appeared to have produced unconscious inferiority feelings in these people, centering around castration fears.

The highly anti-Semitic women showed a tendency toward crude generalizations, stereotyped and conventional thinking, along with a marked lack of original responses. At the same time, however, the "high" women showed less evidence of pronounced maladjustment than the women in the "low" group. The "high" women were often troubled by fantasies of a castrating mother-figure (witches), while the "low" women were bothered by thoughts of sin and temptation (devils).

Among the men, the "highs" were more compulsive, critical, and disparaging in their attitude toward the Rorschach, more emotionally inhibited with a basically greater emotional responsiveness than the "lows."

The general explanation advanced by these investigators was that the restricted, narrow personality of those high on anti-Semitism is related to a strict, conventional super-ego which takes over the function of the underdeveloped ego, producing a lack of individuation and a tendency toward stereotyped thinking. In order to achieve harmony with the parents, with parental images, and with society as a whole, basic impulses (which are conceived of as low, destructive and dangerous) have to be kept repressed and can only take a devious expression as in projections, moral indignation, and prejudice. Hence, anti-Semitism helps keep the personality integrated.

The findings of Frenkel-Brunswik and Sanford are suggestive, but because of the small number of cases they are inconclusive. The Rorschach results, however, make it clear why simple lecture materials, for example, are completely ineffective in changing anti-Semitic attitudes. As long as anti-Semitism serves an integrating function for those who have it, deeper levels of personality must be touched to effect a change. Yet it must not be forgotten that the integrating function of anti-Semitic attitudes is not independent of environmental supports for such attitudes. Actually, anti-Semitism will per-

sist as long as society provides situations that make such an orientation socially profitable.

It would be most valuable to supplement the present study with Rorschachs of those high and low in prejudice toward other ethnic groups. The general picture of the "ethnocentric personality" as described by Adorno *et al* [3] might be modified.

Studies of Ethnic Differences and National Character

The dangers of having their data subverted to racist philosophies have led social scientists away from a psychological investigation of national and ethnic differences. Anthropologists like Benedict, DuBois, Linton, Mead, Kluckhohn, Kardiner, and Hallowell have turned their attention to these problems, but their concern has been primarily with cultures psychologically distant from our own. DuBois, Kardiner, and Hallowell have, in particular, demonstrated the usefulness of the Rorschach in such studies. (See Chapter 14.)

Yet there are numerous limitations on the use of the Rorschach with primitive cultures. Henry [12] lists the problems of familiarity with tests and ink blots, the absence of pictorial experience, the strangeness of the culture and the consequent problems of language and rapport. Such problems make it necessary to take detailed case histories, engage in long field trips, and have an extensive knowledge of the culture in order to acquire valid Rorschachs.*

Many of these difficulties can be avoided in the study of national and ethnic differences in the various subdivisions of western European culture. Tests, ink blots, and pictures are familiar items of experience. Historical and sociological data are readily available. Most important is the general similarity in thought processes among all western European people, as formed by the underlying linguistic structure.

That such investigations can be dynamic and un-racist is admirably shown by Lewin in his discussion of the socio-psychological differences between Germany and the United States. He begins with the following hypothesis:

* However, the difficulties may be exaggerated. See Hallowell (Chapter 14) for a discussion of this point.

The average "social distance" (the term used as in sociology) between different individuals seems to be smaller in the United States so far as the surface regions, or as one may say, the "peripheral regions" of the personality are concerned. That means the American is more willing to be open to other individuals and to share certain situations with other individuals than the German. [20, page 18]

The second hypothesis is that the more "central" regions of the personality of the American are more difficult to get access to than those of the German. From these two hypotheses, based on general observation, Lewin goes on to describe the consequences in behavior in topological and dynamic terms, deducing two types of curves of accessibility in interpersonal relations.

One way to test the theoretical constructions of Lewin would be to have Rorschachs on samples of the two populations, controlling for such factors as city-dwelling versus farm-dwelling. At first glance such an undertaking appears to be impossible, requiring the accumulation of thousands of records. It should be recalled, however, that intelligence testers faced the same situation many years ago. The analogy may be extended by pointing out that the problem of large-scale intelligence testing was solved by group administration. The group Rorschach method has not yet been systematically explored nor used to the extent of its possibilities. Until such extensive field work is done, the psychological differences in national character will remain a problem for armchair speculation.

Bleuler's classic study of the Moroccans was the first to deal with the problems of national character, using the Rorschach method.* The Bleulers summarized their results:

We find in the Moroccan a lively, extroverted interest in the episodes of the life around him, a marked enthusiasm under the influence of momentary events, a strong response to emotional stimuli, but in the long run and in the face of the great and important problems of life, the Moroccan is a schizoid dreamer. He lacks the systematic, energetic and persevering striving after outward success. In the long run he is not guided by the delight in earthly pleasure or by the sensitivity to real suffering, but rather by a fantastic, egocentric, unreal

* Hallowell also discusses this study and other studies mentioned in this section. See Chapter 14.

and strange attitude. . . . In the broad lines of his development he is self-centered, introverted, rather independent of the outer world and tends to prefer seclusion. [5, page 113]

Tulchin and Levy [41] studied the Rorschachs of 23 Spanish and 22 English refugee children. The children ranged in age from 8 to 14 and were matched for sex and age. These investigators concluded that Spanish refugee children were compliant, cautious, slow, suspicious, and rather anxious. They were intellectually less abstract and more concrete than the English refugee children. Emotionally, they were responsive, outgoing, and affectionate. Their emotional responsiveness was fairly well controlled and they showed no evidence of brooding. These children tended to think largely in terms of concrete experience and of a real world with little attempt to conceptualize or theorize their expression. The Spanish children were more outgoing, more expressive emotionally, more responsive. Yet, at the same time they showed more obstinacy and suspicion, probably the result of greater insecurity and anxiety.

In contrast, the English refugee children were less outgoing, more reserved, and less demonstrative. They tended more toward fantasy and abstraction and the repression of affect. They dealt more easily with abstractions, organized their material more quickly, and yet did not lose touch with concrete data. They were not as likely as the Spanish children to become involved with rare details, nor did they show as much patience. Their emotional responsiveness generally went into greater verbalization with less demonstration of affection. They also showed a certain amount of suspicion and anxiety.

The pictures reported by Tulchin and Levy tended to agree with and support the findings of Kerr [16] and Maza [23]. It should be mentioned, however, that the number of subjects in all these cases is too small to allow any generalization to the respective parent nations.

There have been surprisingly few studies of American Negroes with the Rorschach. It is surprising because the Rorschach is the best available technique for evaluating intellectual capacities on a "culture-free" basis, a basis not subject to the biases some investigators feel to be present in the objective intelligence tests.

Abel, Piotrowski, and Stone [1] studied institutionalized white and Negro morons, whose IQ's ranged from 65 to 70. A total of 52 Negroes and 52 whites were equated for socio-economic status and length of time in institutions. Unlike Hunter [13] the investigators found no significant difference between the groups in the amount of *M*. The Rorschachs indicated in general that the Negro girls were more aggressive, flexible, and expansive than the white girls. This difference was explained on the basis of the caste system in the cultural milieu. Stainbrook and Siegel [38] found that college Negroes have less emotional instability than white students. Needless to say, the available studies permit of almost no statement regarding the psychological characteristics of the various classes of the Negro people in the United States.

Abel and Hsu [2] studied the psychological differences between American-born and China-born Chinese by means of the Rorschach. Their fifty-six subjects were between twenty and thirty-nine years of age, had high school education or beyond, and were residents of New York City. The subjects were divided into four groups: Chinese-born males and females, and American-born males and females.

These investigators found that the China-born males and females "fit into the cultural pattern of controlling their impulses and maintaining a pliant, but to some degree distanced role in interpersonal relationships." [2, page 299] This balance between self and environment is related to the role each person is expected to play throughout his life. If one approaches a stranger too closely, one loses one's role and equilibrium.

The China-born females showed greater flexibility than the males. They are not as responsible in the Chinese culture as the males, in Hsu's phrase, for "following in the shadow of their ancestors." With such control, the Rorschachs indicated more than a usual amount of sadness, but pleasure in nature and eating is used as a vehicle for expressing emotional spontaneity.

The American-born males showed great emotional disturbance on the Rorschach. Most noticeable were repressed and unsatisfied feelings of rebellion, and a particular dilemma in the sexual area. It was pointed out that culturally they are attempting to break away

from the traditional pattern of their forbears and fit into the American pattern. This conflict at times is so severe that they "feel quite torn apart."

The American-born females are anxious also, but are more aware of their inner conflicts. Although they have both hostile and fearful feelings toward people, and are very sensitive to the opinions of others, they are more expressive of their feelings of difficulty. They are neither pliant and controlled nor dependent, as are the China born females. In spite of their anxiety, they are able to maintain the traditional equilibrium to some degree.

The studies performed on ethnic and national differences by means of the Rorschach are as yet too few. Large-scale studies are necessary to ascertain the degree of difference of various traits or personality characteristics among the various subdivisions of the human race.

Klineberg, aware of such a need, presents a practical and excellent point of departure for such an investigation. He says, since "there are people with wide experience in application of Rorschach technique in various parts of the world—Brazil, England, France, Germany, Italy, Switzerland, the United States, etc. . . . it would seem worthwhile to attempt to collect and compare the results obtained in different countries." [18, page 83]

One danger in such investigations—and perhaps one of the reasons why social scientists have not engaged in such research—is that conventional stereotypes will be "put into" the data. Another danger is that such differences as do obtain will be used to explain the relative status of the different subdivisions. Such class-theoretical thinking can indeed play into the hands of racists and defenders of the status quo. It would be necessary to search for the causal explanations in terms of the cultural training. Klineberg emphasizes that Rorschachs collected on a cross-cultural basis can be interpreted adequately only along with independent knowledge of the culture as a whole.

Studies of the Effects of Social Situations

What parts of personality structure are affected by particular social situations, and how they are affected, are problems attracting some interest in social psychology. The interesting Rorschach study of Kimble [17] was concerned with the effect of a group situation on the *Erlebnistypus*. In this study, fourteen university students had Rorschachs in a standard testing situation and also in a social situation—a restaurant. Nine of the students had a social-standard sequence of testing and five a standard-social sequence.

A significant difference was found in the $M : \text{Sum } C$ ratio, in the direction of more color in the social situation. The subjects were more responsive to emotional stimulation when in the restaurant than when alone with the tester. Kimble concluded that personality is also a function of the particular social situation, but that only parts of the personality change in the situation. What parts change, it was felt, needed further investigation.

Studies of Vocation and Personality

The investigation, by means of the Rorschach, of the relations among vocational choice, success, adjustment, and personality is associated almost entirely with the name of Anne Roe. Her first study, on artists, was undertaken originally for the Yale School of Studies on Alcohol and was planned to investigate the relation between use of alcohol and artistic creation [28]. She found the material so rich that she turned her attention to the general problem of vocation and personality. She has since done a series of studies on paleontologists, biologists, and physicists, and is currently investigating psychologists.

The twenty men who were the subjects of the study on artists were of top rank, representing most of the trends in present-day painting. The data consisted of interviews, study of their paintings, critical opinion about them as expressed in various art journals, the TAT, and the Rorschach. The results are discussed in various papers [29, 30, 31].

Analysis of the results showed a great variety of personality pictures and adjustment levels. The artists were characterized as a group

by above-average intelligence, unusually great use of whole responses, marked prevalence of color and shading shock, and overproduction of responses with sexual and anatomical content. The Rorschach indicated that, as a group, these eminent artists had a characteristic emotional adaptation that was non-aggressive and rather passive in nature—more feminine than masculine by our cultural standards. There was, however, no evidence of homosexuality. Roe felt that this type of adaptation is characteristic in our society of the sensitive, intelligent man who follows more or less intellectual pursuits. Her findings, in general, agreed with those of Prados [25]. The latter's conclusions were that artists had superior intelligence—emphasizing abstract thinking; disinterest in routine, every-day problems; fear of mediocrity; strong drives for achievement; and richness of inner interest. They showed strong sensitivity and emotional responsiveness to the outer world, with a lack of adaptability.

The major difference between Roe and Prados appears to be in the interpretation of the drive for achievement. The marked use of whole responses demonstrated in both studies makes it clear that such a drive exists for artists, but Roe seems to feel that it is embedded in a general passive orientation.

A striking finding of Roe's was that about half of the eminent artists did not show marked indications of creativity and some of them showed a specific lack of it. (See Volume I, pages 258–259, 466, 476.) In trying to account for this finding, Roe presented two alternatives: (1) creative ability may exist without being shown in the Rorschach, or we may recognize some indications of it and not others; or (2) one may be a successful artist in our society without having creative ability. In case anyone with a special bias would like to pick the second alternative, Roe pointed out that, of the six men who gave none or only one human movement response, only one is an "abstract" painter.

An attempt to discover the relationships between Rorschach determinants and the way in which the men painted was not very successful. Yet a few tentative generalizations were ventured. The representational and naturalistic painters appeared better adjusted than

the others. The colorists were more responsive to the colored cards. There was an association between originality in painting, on the one hand, and the use of human movement and white space, on the other hand.

In individual instances, performance on the Rorschach was associated with the way the artist approached his work. One painter stated that he found the general plan of a painting easy to deal with but that he always had trouble with some little detail. In his Rorschach, he was able to construct good wholes, but in a number of them some small detail was either unrelated or bizarre. Another painter commented that he was not constrained by the things he saw in front of him; his Rorschach confirmed this. The artist who used the fewest whole responses stated that he had difficulty with making his compositions a unified whole. A painter whose protocol was full of references to terrifying things in empty space customarily covers his canvas with a mass of details, leaving no large undifferentiated surfaces.

Although there was an individual relation between the particular artist, his work, and his Rorschach, there was no general personality pattern, other than those mentioned previously, that showed a direct relation with the choice of this particular vocation.

Roe has been engaged for some years in a Rorschach investigation of scientists. She found vertebrate paleontologists much more homogeneous with respect to certain personality characteristics than the artists [27]. The paleontologists tended to abstract, formalized, objective thinking and inhibition of any tendencies to project themselves into a situation. They empathized little, neither with things nor people. Like the painters, they tended to have a passive emotional adaptation, according to Roe. Only a few of them—and these were the ones whose work was most broadly theoretical and widely significant—showed creative capacity.

The Rorschachs of biologists showed a somewhat different picture [33, 34]. Among 188 biologists, no differences were found in sex or rank or between public or private institutions or geographical region. There was high consistency in the presence of above-average use of unusual details, a very high incidence of "shading and color

shock," and a considerable restriction in the use of human movement. The "shading shock" was not associated with dominance of teaching or research interests.

There were some interesting differences among the different fields of biology. The botanists were fairly well adjusted, without serious strains; the anatomists had poorer intellectual control; the physiologists demonstrated more free anxiety and more concern with immediately personal problems; the geneticists showed more emotional dominance. But most striking was the general consistency among all groups in showing "shading and color shock," in use of rare details, and in the restriction of human movement responses.

In her study of 20 eminent research biologists, Roe used the Rorschach, TAT, and a Verbal-Spatial-Mathematics test. The Rorschach results were, in general, similar to those found with the larger group of biologists. There were an increased use of *W*, large amounts of rare detail, restriction in *M* (but no general restriction in that area), and a more general restriction in color. The $F\%$ was not particularly high, but the formal aspects were dominant in all compound responses. "Shading shock" was as prevalent among the eminent biologists as among the larger group. The former were generally unaggressive and showed little interest in interpersonal relations. From material other than the Rorschach it was concluded that the eminent biologists showed a restricted sexual development, with a history of social awkwardness, shyness with girls, and lack of warmth or interest in people [34].

In her recent study of eminent physical scientists, Roe obtained life history data as well as Rorschach, TAT, and a Verbal-Spatial test [35]. Of the 22 carefully selected eminent physicists, 12 were classed as theorists and 10 were classed as experimentalists.

In general the Rorschach protocols were rich and varied, although there were a few restricted subjects. There was considerable evidence of great, but not too well-controlled, intellectual and emotional energy, a very high percentage of unusual details, and a notably prevalent general use of three-dimensional shading and inanimate movement. Like the biologists, the physicists showed shading shock and a low incidence of human movement responses. Compared

to the experimentalists, the theorists showed greater awareness of personal problems, more control of anxiety, but less ability to get away from a devised concept. Both theorists and experimentalists appeared poorly adjusted socially. Roe felt that this was due to impulsiveness and egocentricity on the one hand, and to general apathy with regard to social relations on the other hand.

The one thing that seemed to characterize the total group of physicists was an absorption in their work, over long years, and frequently to the exclusion of everything else. This was also true of the biologists.

The biologists and physicists were similar in that both groups produced only slightly higher than average whole responses, a much greater than average use of rare details, and a restriction of human movement responses. They differed primarily in the relative emphasis on form and shading. The biologists were more concerned with form and the physicists with three-dimensional shading and inanimate movement.

In advancing an explanation for this difference, Roe felt that there were two possibilities:

In conventional Rorschach terms, one would infer that the biologists, while having considerable basic anxiety, have this anxiety pretty well structured and rely heavily and effectively upon intellectual control of behavior, and that the physicists have a strikingly large amount of free anxiety, readily mobilized, and have considerably more emotional responsiveness than the biologists do. Perhaps, however, the vocationally relevant point is a simpler one. Biologists are deeply concerned with form, to an extent that permeates their whole personality development; physicists have relatively little concern with form as such, but they are concerned with space, and with inanimate motion, and this, too, is deeply ingrained in them. [35, page 323]

Roe felt that even if the latter possibility were the correct one, the difference between the physicists and biologists was not a result of their vocation *per se* but was characteristic of their basic personality structure.

For a working hypothesis to explain the relation between vocation and personality, Roe draws upon the work of Hendricks and

Angyal. Hendricks, concerned with the emotional importance of work in analytic theory, says: "Work is primarily motivated by the need for efficient use of the muscular and intellectual tools, regardless of what secondary needs a work performance may also satisfy." [11] This concept is similar to what Angyal calls the drive for autonomy.

Angyal [4] posits two types of drive. These are the "autonomous" (the need to master the environment) and the "homonomous" (the need to fit into supraindividual categories). Roe uses this hypothesis in accounting for differences among scientists and artists. She says:

Men whose autonomous drives are strong, but not markedly so, whose intellectual make-up tends to the relatively greater dominance of verbal ability and whose homonomous drives seem to find satisfaction in empathy with ideas, with symbols of things rather than with things themselves, are men who are well suited to the pursuit of science, and are likely to be attracted to it. In another group, where homonomous drives seem to be very much stronger, but in whom the major need is for empathy with the world outside, with things rather than with people or with people as a special sort of thing . . . we find the artists. [32, pages 265-266]

Roe also posits that "autonomy" has a more masculine tinge and "homonomy" a more feminine tinge, but cautions that at present such a conception is nothing more than a working hypothesis and needs more careful study.

A different explanation of the relation between vocation and personality, but also arrived at by means of a projective technique, is that of Szondi [40]. He feels that the choice of occupation as well as the choice of one's mate and friends is due to the "operotropic expression of the root factors." By this is meant that one selects his occupation as a projection of the most latent factors within the personality—those that find no satisfaction at all. Szondi's approach seems to be different from that of Roe. Instead of studying the personalities of people with a particular vocation, he investigates the connection between the latent needs of a particular person (as demonstrated by the Szondi test) and his work. In such a way, he at-

tempts to generalize from a process (the latent factors) to a variety of vocations that a person having such needs would select. Insofar as several people would have the same or similar latent needs, they would have psychologically similar occupations, although the latter might be quite different culturally.

There is, as yet, insufficient evidence to assess the relative merit of the two approaches.

Areas for Research

It is by now apparent that the writer feels that the Rorschach can be used profitably in many areas of social science. In the following pages examples of the ways the Rorschach can be used in some of these areas will be presented. But a statement of the limitations of this technique in social science is just as important to clarify its position.

Social phenomena, following Krech and Crutchfield [19], may be analyzed at three different levels: (1) the level of the social behavior of the individual; (2) the level of behavior of social groups; (3) the level of operation of social organizations.

Whenever individual analysis is part of a study of social phenomena, the value of the Rorschach is obvious. That such a concern is an integral part of social science is shown by the fact that Krech and Crutchfield write a social psychology that is primarily oriented toward the individual, his perceptions and motivations.

The use of Rorschach at the second level of analysis—the behavior of social groups—is not so obvious. When the unit of analysis is in terms of the individual members, it is clearly possible to use the Rorschach. But when the unit is the group as a whole, then the Rorschach becomes meaningless, because groups have no personalities, perceptions, or motivations—these all reside in the individual. This is not to say that the members of a group may not share, for example, a certain trait or process. This can obviously be the case (as in the relation between vocation and personality) and the Rorschach is a method by which such commonalities may be ascertained.

The crucial point is that these Rorschach traits or characteristics reside within the individual and are not a property of the group as a unit. To say that a group has a "personality" is to commit an error. The "group soul" was just such an error in social psychology and is, even now, not completely abandoned.

Krech and Crutchfield furnish an interesting methodological example of this point in discussing Schneirla's study of the behavior of a swarm of ants. Schneirla described the behavior of the swarm as a whole—how the swarm moved on a foray, circumvented physical obstacles. From these observations it was possible to formulate general laws about the behavior of swarms of ants, such as the relation between patterns of movement and the physical environment. Nothing, of course, could be said about the behavior of any single ant.

Schneirla found that it was necessary, however, to examine the behavior of single ants if he wanted to find out why the laws of group behavior held true. For example, it was possible to show that the movements of the ants in the physical environment could be explained on the basis of specific properties of individual ants, such as the stereotyped following of the colony chemical.

Rorschachs cannot be given to ants, of course, but the methodological principle holds true. Whenever the behavior of the group as a whole is the unit of analysis, then individual study, including the Rorschach, is not appropriate. The latter is useful only if there is an interest in properties of the individual members of the group—and here the unit of analysis is the individual, not the group. By this token, it will be seen that in the study of social organizations—where the unit of analysis is the institution—the Rorschach is seldom appropriate. Institutions have their existence through individuals, but exist outside them and continue irrespective of particular individual members. Rorschach data on this level of analysis may provide such conceptions as "basic personality structure" but, again, these are abstractions referring to hypothetical individuals and not to the institution *qua* institution.

If the unit of analysis in a study is kept clear, and the dangers of reductionism avoided, then the Rorschach can be appropriately used in a wide variety of investigations in social science.

Public Opinion Research

The field of public opinion research is an outgrowth of the traditional study of beliefs and attitudes, on the one hand, and the "straw-ballot," on the other. Large organizations are now engaged in a great variety of investigations of public opinion. When public opinion is studied as an institution—in terms of percentages of choices of a large population, for example—individual assessment with the Rorschach is, of course, inappropriate. But there is sometimes the need of knowing something about the individuals comprising the particular "public"—and this is often a need to know the underlying bases in personality for the holding of certain patterns of belief.

Wilner and Fearing [42] point out the growing awareness in the field that a "mere collection" of opinions does not necessarily constitute a public opinion. Katz [15] makes the point that a public opinion must have crystallized around an issue about which people are concerned.

The current view, as expressed by Wilner and Fearing, is that opinions do not exist independently of other opinions, are a function of the intensity and security with which they are held, and (most important with regard to the Rorschach) are intimately connected with the need-value system of the individual. Smith [37] and Goldhamer [10] both stress the relation between opinion and personality factors. Just how the relation expresses itself is not yet fully understood.

Krech and Crutchfield [19, page 184] feel that to seek for correlations between general personality structure and specific beliefs and attitudes "is to pursue a will-o'-the-wisp." Yet it seems that this is an empirical question involving an hypothesis that personality traits or general structure can be said to underly patterns of belief or even specific beliefs. The study of Adorno, Frenkel-Brunswik, *et al* on the authoritarian personality [3] makes it clear that such an hypothesis is tenable.

The implementation of the current view that it is necessary to ascertain the personality correlates of the opinions held by people is

expressed in the recent report of the Survey Research Center at the University of Michigan:

Exploratory overtures have been made in the Center's more recent studies to obtain from respondents data regarding attributes of personality. Results of sufficient promise have been obtained to justify the extension of this attempt to measure deeper characteristics of the individual respondent than are usually considered in survey research. [39, page 9]

Whether the Rorschach can serve this new approach remains to be ascertained.

Action Research

Action research is a relatively new area of social psychology in which research on social problems is concerned "not merely with discovering the causes of these problems, but also with finding the means for dealing with them and applying these means as the most effective methods of bringing about change." [26, page 463] Initiated by Kurt Lewin, action research is described by Chein, Cook, and Harding as "a field which developed to satisfy the needs of the sociopolitical individual who recognizes that in science he can find the most reliable guide to effective action, and the needs of the scientist who wants his labors to be of maximal social utility as well as of theoretical significance." [6, page 44]

Proshansky [26] points out numerous advantages in the use of projective techniques in action research. Individuals in a community setting are likely to react with suspicion and antagonism to an investigator who enquires about their attitudes on controversial and loaded issues. Neither are they as articulate, with respect to questionnaires and interviews, as that often-used subject, the college student. Even when a group is willing and able to coöperate, there is a lack of awareness of underlying motives. In short, projective techniques are useful wherever the individuals in the group cannot or will not provide the necessary information. Proshansky also points out that much of participant observation, as reported by community members, can be used projectively.

Although Proshansky mentions the Rorschach as a very valuable

projective device in action research, there is no use of that technique in the studies to which he refers. There may be several reasons for the absence of Rorschach in such research. For one thing, as Proshansky points out, the action researcher is concerned with special problems in a special setting; and he does not necessarily need the deeper information elicited by the Rorschach. For another thing, the action researcher is concerned almost entirely with the characteristics of groups and not of individuals. Proshansky concludes, as a good action researcher, that "in certain situations it may be desirable to forgo testing altogether and concentrate on action." It should be pointed out, in light of the discussion at the beginning of this section, that groups are composed of individuals and that many of the changes that occur in groups take place in these same individuals. The reason that the Rorschach is not more extensively used in this area is more likely that so much training is needed for use of the technique and so much time is needed for administration. It may be that group Rorschachs could serve here. It would appear that if action researchers are interested in basic changes in group attitudes and actions, then the detection of basic attitudes and the evaluation of the effectiveness of action techniques would require the use of devices intended to tap the same levels. It will be recalled that even the study of ants required individual analysis.

Group Dynamics

Like action research, the field of group dynamics is associated with the name of Kurt Lewin [21]. The concern of this field is with the adjustive changes that occur in group structure as a whole, as produced by changes in any part of the group. The term "group" refers to two or more people who bear an explicit psychological relationship to one another.

Although group dynamics is essentially the study of the group as a unit, the definition of the term "group" itself indicates that knowledge of individual dynamics is also sometimes necessary. Rorschach studies of group members could conceivably add much to the usual sociometric analysis.

The Rorschach can be particularly valuable in the study of the

"region of high potential" in the group—the leader. A dramatic example of this is the contribution of Gilbert in the study of the Nazi leaders at the time of the Nuremberg trials. Gilbert, for example, administered the Wechsler-Bellevue, Thematic Apperception Test, and the Rorschach to Rudolf Hess during the latter's amnesic period and during his period of recovery. The report on the Rorschach analysis follows:

The meagre Rorschach record of fifteen responses is characterised by: the lifelessness of the figures seen, showing lack of empathy and inner life; the tendency to superficial structural-whole and built-up-whole figures, indicating a tendency to superficial generalisation in his outlook; the emotionally immature preoccupation with the animal and botanical world, and only lifeless details at that; emotional instability shown in the poor color control, breaking out into the hysterical "blood" response in one place, which is significantly rationalised by a built-up-whole interpretation. The only places where a human figure and an animal figure are seen (both popular figures) they remain *drawn designs* rather than representations of living things. The only movement seen in the entire series is in a mechanical object. All of this bespeaks impotence and lack of vitality in his mental life; a lack of resilience and adaptability breaking out occasionally into uncontrolled emotional responses which are quickly rationalised. The environment consists essentially of figures without life, and there is no projection or contact in the dynamic sense. [9, page 187]

The Rorschach contributed heavily in the final diagnosis of Hess as an hysterical psychopathic personality of the schizoid type [9, page 213].

The psychological study of group leadership can clearly be aided by the Rorschach, but the method can be useful for other problems in group dynamics as well. The questions of group dynamics, as Lewin puts them, are as follows:

. . . What forces are keeping this type of group life? What type of change would be brought about by what type of action? What forces would resist what changes? Under what conditions would a change be permanent and when will group living bend quickly back to previous designs? [21, page 128]

As with action research, knowledge of the individual's capacity to change, and the degree of change in his personality make-up can be provided by the Rorschach.

Let us take a specific example. Suppose we are interested in the differences between authoritarian and democratic families. On the group dynamic level of analysis (the group as a whole) we would be concerned with such things as how the group makes decisions, how the group is affected by environmental changes, the degree of rigidity. This data could be supplemented by a Rorschach study of the family members, ascertaining the quality and quantity of emotional responsiveness, needs for dominance and submission, methods of control, and spontaneity. These would be the psychological correlates of the group dynamic data. With such data it would be possible to predict the response of both the group as a whole and the individual members to a change, for example, in group atmosphere. It is just such psychological data that much social investigation lacks.

Communications Research

At first glance, the problems of communications research and Rorschach research would seem to be widely apart. Yet there are numerous points at which these disciplines overlap. The basic theoretical problem underlying both is the nature of sign-symbol processes. The difference, of course, is the method of approach.

Communications research is concerned with the question, "Who says what to whom and with what effect?" In other words, communications research assesses the characteristics and interrelationships among the communicator (the "who"), the content of the communication (the "what"), and the audience (the "whom").

Central to any single investigation is a content analysis of the material. Janis provides the definition of content analysis as used in communications research:

Content analysis may be defined as referring to any technique a) for the *classification of the sign-vehicles* b) which relies solely upon the *judgments* (which, theoretically, may range from perceptual discrimination to sheer guesses) of an analyst or group of analysts as to which sign-vehicles fall into which categories, c) on the basis of *explicitly*

formulated rules, d) provided that the analyst's judgments are regarded as the reports of a *scientific observer*. [14, page 55]

From this definition of content analysis, one may see the underlying similarity between the communications analyst examining a document and the Rorschach analyst examining a protocol. The difference is one of degree—the communications analyst relies more heavily upon quantification and applies the tests of reliability and validity; the Rorschach analyst is partly quantitative in his approach (psychogram and formulas) but relies more heavily upon clinical experience. The latter provides the Rorschach analyst with his "norms." Another difference is that of the categories by which the content is analyzed. In communications research, a new set of categories is used with each content analysis, depending upon the hypotheses as to what is "in" the material. The Rorschach analyst, on the other hand, uses the same set of categories with each protocol. The final difference—the degree of symbolic interpretation—is also a quantitative difference, rather than a qualitative one.

Communications research deals with all sorts of mass media such as movies, radio, television, newspapers, comic strips, novels, and the orientation to these media is usually social-psychological. It is somewhat surprising that techniques such as the Rorschach have not been used.

The problem of the intent of the communicator, for example, necessitates not only inferences from the content of the communication but also knowledge of the characteristics of his personality structure. The word "intent" is used here as developed in Fearing's theory of communication. He says:

The construct intent refers to the fact that the act of producing content is *directed* rather than random or aimless, and implicitly or explicitly assumes future effects.

He continues:

The intent of the communicator in producing specific content is not only concerned with expected effects on interpreters (the audience), but assumes they possess particular need patterns and perceptual capacities. In other words, *in the act of producing content, the inter-*

preters are always in the psychological field of the communicator. The communicator's perception of the interpreters may determine the character of the content he produces. [7, pages 76-77. Italics in original.]

From this definition of intent, it may be seen that the personality of the communicator is of great importance in the assessment of the relations among intent, content, and effects. Prediction of audience response, as another example, requires information as to their needs and dispositions. The Rorschach could be extremely valuable here, too.

One study now under way * is concerned with differences among a variety of subjects in the perception of a motion picture. Both the person who made the film and the audience who observed it were given Rorschachs as well as questionnaires about their experience with the film. A variety of interrelationships among the characteristics of the communicator, the content, and the audience are then possible of investigation.

Another way in which the Rorschach can be useful in communications research is in the development of theory. Fearing [7] points out the lack of systematic theory-building in this area. Rorschach theory of the relations between perception and motivation could well be incorporated and tested in the communications situation.

Finally, communications research can also be of benefit to Rorschach research. The methods of assessing reliability and validity in communications, although still imperfect, can be of use in the systematic testing of Rorschach hypotheses. That methodological problems of projective techniques and communications research are similar can be seen in the recent investigation by Shneidman [36] where a number of thematic test experts interpreted TAT and MAPS protocols of a single subject. The problem was to find a method of comparing the interpretations of the experts with each other and with therapists' judgments. Shneidman's use of Q technique and inverse factor analysis points to a new and profitable

* Marvin Spiegelman, "Effects of Personality on the Perception of a Motion Picture" and "Evaluation of Personality by Viewing a Motion Picture," to be published in *J. Proj. Tech.*

method of comparing judgments and interpretations in both Rorschach and communications research.

Knowledge for What?

It is almost twenty years since Robert Lynd wrote his penetrating analysis of the social sciences in America, *Knowledge for What?* [22]. A survey of the social psychological literature since that time shows that the "outrageous hypotheses" he proposed have not yet been investigated—and are still outrageous. Lynd took the title "outrageous hypotheses" from the geologist W. M. Davis, who pointed out that the great advances in physics and geology have been made by outraging in one way or another a body of preconceived opinions or points of view within the science.

Lynd proposes twelve "outrageous hypotheses" for social science, which lead away from the often unimportant problems to which social scientists address themselves (the kind that Bush satires, "Is the moon made of roquefort or gorgonzola?"). Among Lynd's hypotheses is one that strikes at the core of social science. He poses this question: What kind of culture would that culture be which would use its full array of knowledge and productive resources to maximize the quantity, quality, and useful variety of daily living for the masses of our American people? [22, page 220]

Lynd's point is that the real, though unspoken, goal of social science is to specify Utopia scientifically—what it would be like and how to achieve it. Such a research goal may appear ephemeral and over-idealistic. Many social scientists would vehemently claim that such a goal, both logically and practically, is outside the realm of science. Yet there are other social scientists who subscribe to the view that science, as an institution, has its problems set by society and is intimately connected with the applications made of research. This group would also feel that efforts at modification of society are part of its scientific concern. This is the view of action research, for example.

For those who share the latter opinion, the Rorschach may serve a helpful function in research. Many Rorschach workers, for example, find that the majority of their records portray maladjusted

personality structures. If this is the case, then there must be some norm or "ideal" by which to judge these records as maladjusted. Yet there is no statement or study of what this "ideal" personality would be like. A step toward the solution of Lynd's "outrageous hypothesis" would be (a) for clinicians to specify what the characteristics of this "ideal" personality would be; (b) to find approximations of this personality by means of the Rorschach; (c) for social scientists to study the social situation that produced such a personality.

Is such an hypothesis truly "outrageous"?

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The Rorschach Technique in Personality and Culture Studies*

The use of the Rorschach technique by anthropologists emerged in the course of the development and expansion of a new research area, initiated by American anthropologists in the present century. Although initially focused upon investigations of the relations between culture patterns and personality organization among non-literate peoples,[†] within the past decade essentially the same approach has been used in inquiries concerned with differences in "national character," as represented in the more populous, literate and complex political units of our contemporary world. Personality and culture studies open up wide vistas of inquiry, once the facts of cultural variability and patterning are linked with our knowledge of the conditions necessary for the development of a personality structure in man, and the determinants relevant to its form and functioning.[‡]

* Portions of this chapter have been published in *Culture and Experience*. University of Pennsylvania Press: 1955.

† For a review of this area of research and an extensive bibliographical note see Hallowell [67].

‡ The question of the ultimate roots of human culture and personality structure in man when viewed in evolutionary perspective is discussed by Hallowell [63]. This article has been so clearly epitomized by Donald MacKinnon that I quote:

The continuity of behavior in the animal kingdom has long been accepted, despite the fact, and the problem which it raises, that man is the only animal who pos-

Group Membership and Personality Structure

The link between the psychological data and the cultural data lies in the processes by which, and the specific conditions under which, the human neonate is groomed for adult life and activity. Physical maturation, learning, and the psychological integration of experience through symbolic mediation are processes essential to the acquisition, transmission, and maintenance of what the anthropologist refers to as the culture patterns of a people. The same processes are just as essential for the acquisition of a personality structure by an individual. No individual, whether anthropologically or psychologically viewed, is only human in the generic sense, unless we are content with a level of abstraction that merely emphasizes the lowest common denominator in each case. Every human being undergoes a socialization process that has reference to the beliefs, concepts, values, technological devices, skills, and the like which, in their totality, characterize a distinctive mode of life—a culture. The individual is an integral part of an ongoing socio-cultural system that defines his relations to a physical and cosmic environment, as well as patterns and motivates his interpersonal relations with other members of his society. The socialization process, therefore, defines the content of the learning process and limits the conditions under which personal

sesses both personality and culture in the sense in which these words are usually employed. It is, Hallowell suggests, not learning so much as the capacity for symbolization in learning which plays the unique and crucial role in the evolution both of culture and of individual personality. Human learning, in contrast to that of other animals, is cultural, and culture is neither built up nor transmitted through simple conditioning but rather by the complex processes of symbolization, repression, identification, etc. Two features make man uniquely different from all other animals: first, the emergence of a dominant integrative center of the personality and the development of ego-centered processes which Hallowell calls self-objectification (e.g., the fact that "I" can think of "me"); and second, the development of a super-ego which is capable of unconscious evaluation of ego processes and which therefore serves as a brake upon ego functions. (Donald MacKinnon, in *Annual Review of Psychology*, Stone and Taylor, Eds., 1951, Vol. 2, pp. 119-20.)

For a discussion of the nature and variability of self-concepts as internal frames of reference in man and the common functions of all cultures in relation to the basic orientations of the self, see Hallowell [68].

adjustments must take place. Whatever degree of individuation or idiosyncrasy occurs only can emerge out of the matrix set by the traditional culture. Empirically and concretely, therefore, the question arises whether human beings differ not only as individuals and in sex and age, but likewise with respect to characteristics that are related to their membership in different socio-cultural systems, and their position in that system.*

Once we view the human situation concretely and in its integral aspects, what we discern is a highly complex network of relations which, however labelled categorically, do not lend themselves to simple abstractions or to easy manipulation as independent variables. Men live in societies and these groups always have a structure that is definable in terms of the differential roles of participant members; there is undoubtedly a sociological dimension to the human situation. But the participating members of any society would not be prepared to play their typical roles had they not undergone a learning process which, at the same time, was the necessary condition for their characteristic psychological structuralization. Personality structure is a psychological dimension of human societies that is directly relevant to the functioning of a human social order. But we cannot fully understand the motivational patterning and the roles played by individuals without examining the beliefs, goals, and values of their society. This implies another dimension: the meaningful content of the cultural heritage. Consequently, such terms as culture, personality, and society are not significant with respect to any connotation they may imply as completely independent variables, but rather as convenient constructs, which, for particular types of conceptualization and analysis, are useful in making certain kinds of distinctions.†

* See Linton [106] on "status personality."

† Kluckhohn and Murray, for example, characterize "the bipolarity between 'personality and culture' as false or at least misleading in some important senses." [94, page xv] Murphy inclines towards a "double aspects" theory—culture and personality are two aspects of one phenomenon; and Spiro [144] addresses himself to the subject of "personality and culture" as a false dichotomy. Nadel gives explicit references to the conceptual differences between "society" and "culture" that have been stressed by various anthropologists. "In recent anthropological literature," he observes, "the terms 'so-

There are, indeed, a few contemporary anthropologists who conceptualize culture as a kind of supra-individual or supra-psychic phenomenon which has a life of its own, obeys its own laws, and in relation to which the human individual becomes essentially a "carrier" or a "creature" of culture. Culture is given the characteristic attributes of a phenomenal level that is, in effect, *sui generis* and to this extent extrinsic to the individual.* This conception of the nature of culture must be sharply distinguished from the viewpoint of those who have been responsible for the development of personality and culture studies.† The latter insist that culture is intrinsic to the

culture' and 'culture' are accepted as referring to somewhat different things or, more precisely, to different ways of looking at the same thing." [121, page 79 ff] Parsons and Shils write: "Culture patterns when internalized become constitutive elements of personalities and of social systems. *All concrete systems of action, at the same time, have a system of culture and are a set of personalities* (or sectors of them) and a social system or sub-system. Yet all three are conceptually independent organizations of the elements of action." [125, page 22]

* Leslie A. White is the most explicit exponent of this conception of culture. Thus he writes: "Culture is therefore a thermodynamic system in a mechanical sense. Culture grows in all its aspects—ideological, sociological, and technological—when and as the amount of energy harnessed per capita per year is increased, and as the means of expending this energy are improved. Culture is thus a dynamic system capable of growth." [163, page 76] And further, the individual is "merely an organization of cultural forces and elements that have impinged upon him from the outside and which find their overt expression through him. So conceived, the individual is but the expression of a suprabiological cultural tradition in somatic form." [*Ibid.*] "Relative to the culture process the individual is neither creator nor determinant; he is merely a catalyst and a vehicle of expression." [163, page 80] "Culture thus becomes a continuum of extrasomatic elements. It moves in accordance with its own principles, its own laws; it is a thing *sui generis*. Its elements interact with one another, forming new combinations in syntheses. New elements are introduced into the stream from time to time, and old elements drop out." [162, page 374] Perhaps the most extreme epitomization of White's position is the casual statement that, after all, perhaps "the most effective way to study culture scientifically is to proceed as if the human race did not exist." [161, page 296]

† These divergent concepts of culture not only represent a contemporary dichotomy; they have historical roots. Bidney points out:

In the development of modern cultural anthropology one may discern two major "themes." On the one hand, there is the theme derived from the naturalistic, positivistic, evolutionary tradition of the nineteenth century that cultural reality is subject to its own laws and stages of development or evolution. On the other hand, there is the recurring theme, which dates back to the humanistic tradition of the Renaissance and the rationalism of the eighteenth century philosophers of the Enlightenment, that human culture is the product of human discovery and creativity and is subject to human regulation. [22, page 347] (See also Bidney [21].)

psychological functioning of the human being and that the reality of culture must be understood as an aspect of psychological reality and by no means a phenomenon *sui generis*. This psychological reality of culture is rooted in the fact that, while the attributes of a socio-cultural system can be abstracted, described, and analyzed in terms that may have no reference to individuals as such, nevertheless, the system itself cannot function, or attain any phenomenal reality whatsoever, except through the social interaction of individuals who have become psychologically structured in a certain way. The concrete locus of the psychological dimension of a culture lies, therefore, in the personality structure of its individuals and in the organized web of their interpersonal relations which makes a characteristic mode of life a social reality as well. Since, among other things, beliefs and concepts that define a world view, along with notions of the self that orient the individual "subjectively" as well as "objectively" in his actions in a world of values, are inherent in all socio-cultural systems, perceptions, motivations, goals, attitudes, and modes of gratification must be organized in terms that are personally meaningful. The human individual would not be prepared for appropriate action unless his culture were actually a part of himself. It is through the learning process, symbolic mediation, and the integration of experience in the course of ontogenetic development that aspects of culture which, from a purely descriptive point of view, may be considered to be "outside" the infant become "interiorized" as an integral part of the personality structure of the adult.* It is because of this fact that

* Tolman remarks that "Psychology is in large part a study of the internalization of society and of culture within the individual human actor." [125, page 359] Newcomb speaks of the individual as having "somehow got society inside himself. Its ways of doing things become his own." [123, page 6] Spiro brings the whole problem to a focus in his 1951 article:

What cultural realists have failed to realize, is that once something is learned it is no longer external to the organism, but is "inside" the organism, and once it is "inside," the organism becomes a biosocial organism determining its own behavior as a consequence of the modifications it has undergone in the process of learning. But the individual culture dichotomy accepted by the realists prevents them from acknowledging this most elementary point and, as a consequence they think in terms of a superorganic culture determining the behavior of an organic adult. [144, page 31]

Cf. Parsons [125].

culture may be said to have psychological reality.

So long as anthropologists were content to handle cultural data in terms of descriptive generalizations and abstractions, or as reducible to traits and complexes whose spatial and temporal relations were of major concern, the psychological reality of culture could be kept in the background, or ignored. Nor could the psychological dimensions of culture emerge as a special problem for investigation. So long as psychologists too, were content to formulate their problems only in terms of abstracted attributes of the human mind—perception, learning, motivation, and so on—and investigate these segments in the individual without reference to the integrated whole that constitutes the personality, the psychological significance of the fact that human beings are always groomed for action within particular socio-cultural systems could not be fully appreciated or investigated. A further consequence was that the psychological field of the individual was oversimplified. Certain determinants of psychological reality were overevaluated since, broadly speaking, only three major categories of determinants were clearly differentiated: (1) the inherent attributes of the human mind responding to (2) arrays of stimuli arising from an outer physical or geographic environment and other human beings, modified to some degree by (3) determinants mediated through learning that give rise to a limited range of individual differences. The determinants traceable to *group membership* in one socio-cultural system, as compared with another, and the differential consequences of this fact were left out of the picture. Consequently, the psychological depth of determinants of this order, explored at the level of personality structure and personality dynamics, could not emerge as a matter for serious consideration.

Confusion of Culture and Race in Rorschach Research

Again, it is easy to see how such an oversimplified paradigm could lead directly to an overweighting of reputed biological determinants. If cultural factors as a source of *group* differences are ignored, it is possible to interpret the latter as functions of differential components

of the organism itself, since they cannot be accounted for by reference to the generic attributes of the human mind, or to outer stimuli. Thus group differences of a psychological nature may come to be taken as expressions of innate "racial" factors. This kind of interpretation is illustrated in the history of the Rorschach test.

Rorschach himself was apparently convinced that *Erlebnistypen* were, to some extent, if not entirely, determined by biological components. The weighting he gave to "racial" determinants in this connection, and the cross-racial, rather than the cross-cultural, use of the test which he envisaged is clearly implied in the following statement:

The experience type should be different in various peoples and *races*. The average experience type of the 40-year-old Englishman is very probably quite different from that of the Russian, German, etc., of the same age. *This difference should be even greater if the difference in race were greater.* Large series of data would provide easily comparable and useful information . . . The test itself is technically so simple—it can be done through an interpreter—that it may be done with the most primitive Negro as easily as with a cultured European. [129, pages 96–97 of English translation, page 92 of German edition. Italics added.]

Since Rorschach based his typology of personality on the balancing of *M* and *C* factors, the whole question is further complicated by the typological approach, as such, in addition to possible invariant relations between personality types and biological determinants. On methodological grounds American psychologists, in particular, have been divided in their attitude toward the value of any typological scheme of personality classification.* And there have been differences of opinion among Rorschach experts themselves in regard to the status of the *Erlebnistypus* as a construct and the emphasis to be placed upon the *M:C* ratio, as such.† Klopfer adopts two hypotheses:

* For a review of the question of psychological typing see K. Young [165] Chapter 13.

† In his first book, for example, Beck expressed the view that "Rorschach overweighted the importance of this index, and it is still being overweighted in Europe." [15, page 265] And in his latest series of volumes, after quoting a paragraph from Rorschach illustrating the emphasis placed upon *Erlebnistypus*, Beck comments:

From this language, Rorschach's *Erlebnistypus* becomes a concept of the whole personality. It is truly that. Also, it is a hypothesis, as yet quite elusive, not representing

(1) that "this susceptibility to be stimulated from within, or to be stimulated from without, is distributed in mankind according to a normal curve. This suggests that the majority of all people are about equally responsive to stimulation from without and to promptings from within, while relatively fewer are predominantly determined by one kind of stimulation only" and (2) "that cultural factors play an enormous role with regard to this kind of distribution of life energy." [91, page 222] It seems pertinent therefore, to ask: On what grounds are the *Erlebnistypen* of Rorschach, or other constellations, to be considered significant indices to attributes of the personality that can be said to be "racially" determined?

In 1935 the Bleulers, reporting their Moroccan data, which differed markedly in the psychological picture it presented from that familiar in European protocols, invoked a "racial" factor as the ultimate determinant. Although they gave some weight to cultural factors, to them such determinants likewise had an underlying "racial" basis.* The implication, which is made explicit in the very title of

any psychological activity concerning which we have knowledge, and leaving much to the imagination in the effort to handle it. Reading Rorschach's pages leaves no doubt that the concept meant something very real to him. Nor can any serious student of the test, or of the psychology of personality generally, afford not to read those pages. The *Erlebnistypus* appears to be to Rorschach a psychologic medium or essence in which all the mental activities of the individual are suspended. To understand the *Erlebnistypus* is to him a prerequisite to understanding any aspect of a personality, its major forces and finer nuances. For all this, it remains a vague concept, not yet concrete enough to use as an interpretive test factor. It is safer to rest rather on its components. M and C. Rorschach does essentially this, since he always identifies the *Erlebnistypus* in terms of dominance of M or C or of their equivalents, introversive or extratensive trends." [16, Volume 2, page 61]

On the other hand, Guirldham expressed some amazement at Beck's evaluation and said he found the *Erlebnistypus* factors "to be the most valuable core of Rorschach's work." [54, page 848]

* The Bleulers cannot avoid the conclusion that there is *some* correspondence between the Rorschach results and the national culture of the people. This is epitomized in the statement that "we are of the opinion that the Moroccans' responses in the Rorschach test show the essential characteristics of their national life, their literature, their art, and their science." [24, page 111] If taken out of context, this statement might seem to indicate that the Bleulers had adopted the same point of view as that found in American personality and culture studies. However, they go on to say that ". . . it seems probable that both the inexperience in the interpretation of pictures and some *deep-seated racial characteristic* explain the responses in the Rorschach test, because this inexperience is due to some peculiarity of the *racial character*." [*Ibid.* Italics added.] The

their article, is that the Rorschach test is an instrument capable of discriminating psychological *group* differences that are innate and biologically rooted, rather than acquired through a process of socialization learning, and experience. In the same year, P. E. Vernon specifically drew attention to the same potentialities of the Rorschach:

Racial differences might be explored since the ink blot material is less open to the objection of cultural determination (except as regards the content category) than most tests. Few comparable results are available at present, but Spanish and English children seem to be somewhat more introversive than Swiss, and French ones more extratensive. Bleuler has tested a number of Moroccan Berbers and Arabs (not yet published). It will be surprising if data on the *Erlebnistypen* of Nordics, Jews and Negroes are not soon forthcoming from Germany and America. [156, page 915] *

While subsequent work with the Rorschach has included subjects of different racial groups in many parts of the world, the chief selective emphasis has been upon cultural rather than racial affiliation. This fact in itself reflects the growing interest in the relation between personality and culture, rather than in factors of a biological nature assumed *a priori* to be relevant to the study of personality. Nevertheless, there have been a few investigations undertaken where it appears that the choice of subjects was dictated primarily by their "racial" affiliation and the desire to find out whether psychological differences would manifest themselves. Perhaps it may suffice here to raise the question whether, despite the exercise of methodological sophistication and restraint in drawing conclusions, such investiga-

emphasis of the authors on a racial factor becomes even more apparent when they express the opinion that the origin and perpetuation of the well-known Muslim taboo on the artistic representation of human beings can scarcely be due to anything less than a national character and culture that is "racially" determined. This interpretation, if generalized, amounts to no less than a "racial" theory of human culture. Nothing could be more antithetical to the findings of cultural anthropology. Yet Hertz accepts this interpretation since she writes: ". . . *Bleuler has demonstrated* that Moroccans do not react to the ink-blot as Europeans in every respect . . . and that these differences cannot be considered as indicative of mental inferiority but due to peculiarities in their racial history." [74, page 115: *Italics added.*]

* The reference to Bleuler's forthcoming article and to Nordics, Negroes, and Jews indicates quite clearly that the author is using "race" in the anthropological sense and hence distinguishing it conceptually from nationality.

tions can be said to have demonstrated conclusively that the differential results obtained can be attributed to "racial" factors at all.* With respect to this issue the following considerations need reiteration:

1. The distinction between nationality, a socio-cultural phenomenon, and race, a biological phenomenon, must be sharply made.†
2. Anthropologists themselves are not in complete agreement as to how the peoples of the world should be racially classified, or even upon the basic criteria on which such a classification should rest.‡ But there is agreement that scientifically, rather than popularly employed, *race* should be confined in its connotation to morphological or physiological characteristics of a segment of our

* As, for example, in the comparison of white and Negro subjects by Hunter (Sicha) [83] and by Stainbrook and Siegel [146], to single out only two carefully conceived studies. I have not seen the developmental and comparative investigation of Negro and white school children made by Nel in South Africa and referred to by Abel (1948). But with respect to any inference from group differences to "racial" determination of such differences, it is extremely interesting that Abel in a footnote points out that: "The Negro children in the study of Nel were living in their native villages." [1, page 3] Under this circumstance it is quite obvious that cultural determinants, mediated by child training, cannot be left out of consideration.

† The confusion in thought and the misleading conceptualization of genuine problems that results when this distinction is not clearly made is nowhere better illustrated than in the following statement in Bochner and Halpern:

The problem of race has barely been touched. Ideally, interpretation of records from cultures other than our own should be undertaken only with specific understanding and reference to the society in question. For example, since the cultural milieu of the Negro is different from that of the white man, it follows that his more impulsive and labile emotionality has a clinically different meaning. The Negro is one extreme of the racial problem, but all national traits that are incorporated in the personality will leave their mark in the Rorschach record. [25, page 206]

Even Hertz, whose methodological awareness is so acute, is certainly ambiguous when she says: "In the method of comparing groups, the Rorschach has been shown to differentiate between individuals of varying age, intelligence, background, school achievement, of different race or nationality, of deviated personality, and between individuals suffering from various kinds of mental disorders." [78, page 319. *Italics added.*] Is it implied here that racial and national differences belong to the same category, or that the Rorschach can discriminate "racial" as well as national differences?

‡ That is, whether only genotypical features should be used (in which case we would have a classification based essentially on the occurrence of one or more gene frequencies, such as those which are the genetic basis of the inheritance of blood groups) or whether phenotypical characteristics are to be considered. For the former approach see Boyd [27], and for the latter, Coon, Garn, and Birdsell [34]. Vallois reviews the whole subject of racial classification in *Anthropology Today* [155].

species that exhibit some stability in time. The notion of "pure races" is, of course, a myth.

3. If the question of "racial psychology" is raised, the presumption is that constant functional characteristics are associated with morphological characteristics. This has not been proved, although it has often been referred to as a possibility.
4. If subjects are chosen with reference to their "popular" racial classification, this does not necessarily coincide with what an anthropological investigation, designed to discover their racial characters, would show.* Race mixture in the contemporary world is so prevalent that this alone complicates the issue. Consequently, psychological comparisons can have no "racial" meaning unless the actual racial status of the subjects is controlled and made explicit.
5. The long history of the use of intelligence tests as a means of discovering group differences of a "racial" nature, has only served to attract increasing attention to the potency of situational and cultural factors in the functioning of intelligence.† How much more difficult a problem is presented if a hypothetical "racial" factor in personality is the aim of any Rorschach investigation.

Consequently, it seems that either someone should undertake systematic and well-designed investigations in order to demonstrate that the Rorschach test is, in fact, an instrument capable of differentiating genuine racial components of the personality,‡ or "race" as a pos-

* The very different popular or social criteria used in classifying Negroes and whites in the United States as contrasted with those employed in Brazil, would make any psychological comparisons of "white" and "Negro" subjects meaningless in "racial" terms.

† In 1935 Klineberg [89] published the first over-all review and critical evaluation of the psychological aspects of race differences. The points he made have remained valid. Cf. Anastasi and Foley [7], Chapters 20 and 21; Eells, [44], *et al.*

‡ Hertz undoubtedly considers this issue already settled since she has so repeatedly made positive statements to this effect. In addition to her acceptance of "racial" interpretation offered by the Bleulers (already quoted) she says that Loosli-Usteri "has shown that the Rorschach picture is different for different racial groups." [74, page 115] "Race" as a variable is likewise referred to in a methodological article dealing with studies of childhood and adolescence [76, pages 152, 154, 156]; and in a later article [77, pages 68-69], after saying that "the Rorschach method has likewise been

sible determinant should be altogether eliminated from Rorschach interpretation as a misleading and confusing artifact.

Instead of being a test that is in any way suited for the exploration of "racial psychology" it now appears, on the contrary, that there is good reason to believe that the Rorschach technique is peculiarly adapted for the investigation of psychological differences that are *culturally*, as well as personally, constituted. We already have a considerable body of Rorschach data on a number of American Indian groups. What is notable are the different personality profiles we get and the fact that these seem to vary regularly with culturally distinctive modes of life. Since the American Indians have been shown to represent a racial unity in so far as the presence of certain genotypical characteristics is concerned,* even without going into the issue any further, it would appear to be demonstrated in this case that the kind of group Rorschach results obtained cannot possibly be attributed to any racial factor on a genotypical level. In other words, there is good negative evidence in support of the hypothesis that cultural rather than racial factors may be significant with respect to the observable group differences in Rorschach results.† Con-

of service in the anthropological field," this dogmatic statement is made: "*Racial differences have been demonstrated by its use by many investigations.*" [Italics added.] No literature is cited at this point, but Hertz then continues by pointing out: "The method has been employed as an aid in the study of personalities in primitive societies and to investigate cultural variables and individual differences." Reference is then made to DuBois and Oberholzer [43], Cook [33], Hallowell [55-69], and Henry [71], none of whom have been concerned with the investigations of "racial" differences.

* See Boyd, particularly Chap. 9. The American Indians as a group are characterized as "possessing varying (sometimes high, sometimes zero) incidence of gene A_1 , no A_2 , and probably no B or rh. Low incidence of gene N. Possessing Rh_2 ." [27, page 268]

† Parallel results may be forthcoming in the case of the African Negroes since, genotypically defined, they constitute a race. Personally, I should not expect Rorschach data from different African groups to show equivalent psychological pictures. And it may be that when we have such information for comparison, the *reputed* psychological characteristics attributed to the American Negro (a racially mixed group from any point of view) will fall to the ground of their own weight. There is an additional point of interest. There are Oceanic, as well as African and American Negroes. The Alorese belong to this branch. If "racial psychology" is considered to be the fundamental question, then the Alorese Rorschach data should be examined primarily with reference to their "racial" status rather than to their culture. Oberholzer [43] makes no reference to "race" in his analysis of the protocols and DuBois [43], of course, was interested in investigating culture and personality relations.

sequently, Vernon's statement now seems rather paradoxical, and his reference to cultural determination only for the content category very clearly indicates his restricted view of the nature of culture and the actual depth of the cultural constituents of the human personality. Rorschach and Vernon presumably thought of responses to the blots as being elicited from individuals with the generic attributes of a human mind whose responses also varied with respect to the organization of experience and personality structure primarily in the idiosyncratic sense, qualified perhaps by a component that might, on further investigation, prove to spring from "racial" components, if people of a common "racial" stock exhibited an *Erlebnistypus* that remained constant and distinguished them from other racial groups. But it must have been far from obvious to Rorschach pioneers that there might be evidence in the protocols themselves of factors whose significance transcended the idiosyncratic, and yet did not point in a "racial" direction.

It is interesting, therefore, to note that in the same year that Vernon's article was published Wells specifically commented upon the inevitability of cultural components in the Rorschach. He said: "Before the age of 'intelligence' tests, Jung perceived the influence on association responses of intellectual background, and at every turn the meaning of Rorschach response is modified by imponderable factors of culture." [160, page 1428] This is what subsequent investigations appear to show, and it is on the basis of this working hypothesis, rather than on that of "racial psychology" that the Rorschach test attracted the attention of anthropologists interested in personality and culture studies.

Behavioral Environment and Personality Structure

If we adopt the hypothesis that the participation of human beings in different socio-cultural systems has consequences that are psychologically significant, then new lines of investigation and new techniques are necessary in order that determinants derived from this variable may be taken into account along with other components of

behavior. Another way to state the problem is in terms of field theory: cultural differences must be taken into account because they are constitutive factors in the total behavioral, or functional, environment of the members of any socio-cultural system. Without recognition of this fact, the actual psychological field of the individuals of such a group cannot be adequately defined or understood. This is because psychologically man does not merely live in a "physical" or "geographic" or "social" environment that can be defined in terms of its "objective" properties and to which the individual is assumed to respond. Processes of personal adjustment through learning begin to act selectively at such an early age that the world in which the human individual is groomed to perceive, feel, think, and act, is always a *culturally* constituted behavioral environment.* Indeed, all cultures may be said to share a common function in this regard, even though the behavioral environment of one people may differ from that of another. For all cultures, through traditional symbolic means, orient the individual toward himself as an object, as well as toward

* For a more extended discussion of the behavioral environment of man see Hallows [69]. Without systematic qualification the use of the term "environment" has long been proved ambiguous and unsatisfactory. But, as yet, no common terminology has emerged with which to indicate a distinction commonly made. Dewey and Bentley have touched upon the question at a high level of abstraction [41, pages 271-272]. Koffka [96] contrasts "geographical" and "behavioral" environment; Angval says: "The external world can be called environment only when and in so far as it is in interaction with the organism." [9, page 97]. Lewin [102] contrasts "objective environment" or "foreign hull" of the Life Space and "psychological" environment. Stagner uses the term "behavioral" environment. Krech and Crutchfield write: "The real environment of a person is that environment which would be described by an objective observer; the psychological environment is that which would be described by the experiencing person himself . . . The very same physical environment can result in radically different psychological environments for two different persons." [97, page 38] The same statement may be generalized for what I have called the culturally constituted behavioral environment of different *groups* of mankind. Cf. Barker and Wright, who grapple with this problem in concrete terms through the "development of methods of describing the psychological environment of children under non-experimental, field conditions." [10, page 197] They point out:

the description of behavior settings is a primary concern of sociologists and cultural anthropologists. The behavior settings of a community define the culture; as with knowledge of the non psychological milieu, knowledge of the behavior settings of a community does not allow us to reconstruct the psychological worlds of any particular child. However, behavior settings and objects do come much closer to the psychological world and are important symptoms upon which to base a diagnosis of the individual environment. [10, page 207]

a world of meaningful objects other than self; they provide a spatio-temporal frame of reference for thought and action, and motivational and normative modes of orientation for all activity.*

The culturally constituted behavioral environment of man is relevant both to the formative stages of personality development and to the organization of the total psychological field in which the mature personality functions. If this is so, it follows that the responses of any individual in *any* situation must, in some measure, be relevant to this total field. Even though the individual may manifest what can be recognized as common human traits, on the one hand—or highly idiosyncratic ones, on the other—nevertheless, if membership in a particular socio-cultural system has any psychological significance, this fact should be demonstrable in terms of the psychological characteristics that are shared by, and distinctive of, one society or social group as compared with another. These common traits must, in turn, maintain their characteristic stability because they are a function of the “modal” personality structure † which underlies the con-

* See Hallowell [69] for a detailed elaboration of this schema.

† Despite the fact that the terminology employed has varied, both in semantic content and in linguistic expression, psychological phenomena of the same category have been brought to an explicit focus in what has been characterized as “basic personality structure” (Kardiner [87, 88]), “modal personality structure” (Dubois [42]), the “communal aspects of personality” (Kluckhohn and Mowrer [93]). Kluckhohn, writing as joint editor with H. A. Murray of the compendium of reprinted articles in *Personality in Nature, Culture and Society*, says in the Introduction:

The members of any organized enduring group tend to manifest certain personality traits more frequently than do members of other groups. How large or how small are the groupings one compares depends on the problem at hand. By and large, the motivational structures and action patterns of Western Europeans seem similar when contrasted to those of Mohammedans of the Near East or to Eastern Asiatics. Most white citizens of the United States, in spite of regional, ethnic, and class differences, have features of personality which distinguish them from Englishmen, Australians, or New Zealanders. In distinguishing group-membership determinants, one must usually take account of a concentric order of social groups to which the individual belongs, ranging from large national or international groups down to small local units. One must also know the hierarchical class, political or social, to which he belongs within each of those groups. How inclusive a unit one considers in speaking of group-membership determinants is purely a function of the level of abstraction at which one is operating at a given time. [94, pages 57–58]

Fromm [50] uses the term “social character,” and the concept of “national character” likewise belongs in this category. For a survey of the literature on “national character” see Klineberg [90] and Mead [116].

tinuity of a socio-cultural system in its typical form.* Personality is never completely reducible to individuality. A common culture implies, therefore, a common psychological reality,† a common way of perceiving and understanding the world, and being motivated to act in it with relation to commonly sensed goals, values, and satisfactions. It is in this sense that culture is intrinsic to the human personality as well as being a variable but ubiquitous feature of all the societies of mankind. What we need to investigate, then, are the relations of psychological processes (perceiving, learning, thinking, motivation, and the like) to the differential conditions (cultural, situational) of man's existence in particular times and places, considered with reference to the psychological organization and integration of individuals (personality structure) and personality dynamics. The constant principles underlying human behavior can only be discovered and thoroughly understood by taking account at the same

* Fromm has stated:

... modern, industrial society, for instance, could not have attained its ends had it not harnessed the energy of free men for work in an unprecedented degree. He had to be moulded into a person who was eager to spend most of his energy for the purpose of work, who acquired discipline, particularly orderliness and punctuality, to a degree unknown in most other cultures. It would not have sufficed if each individual had to make up his mind consciously every day that he wanted to work, to be on time, etc., since any such conscious deliberation would have led to many more exceptions than the smooth functioning of society can afford. Threat and force would not have sufficed either as motive for work since the highly differentiated work in modern industrial society can only be the work of free men and not of forced labor. The *necessity* for work, for punctuality and orderliness had to be transformed into a *drive* for these qualities. This means that society had to produce such a social character in which these strivings were inherent. [Human beings, in other words, have to become psychologically structured in such a way that they] *want to act as they have to act* and at the same time find gratification in acting according to the requirements of the culture. [51, pages 4-6]

According to Fromm there must be some nuclear character structure "shared by most members of the same culture," the functioning of which is essential to the culture as an ongoing concern.

† Lewin points out:

Experiments dealing with memory and group pressure on the individual show what exists as "reality" for the individual is, to a high degree, determined by what is socially accepted as reality. This holds even in the field of physical fact: to the South Sea Islander the world may be flat; to the European it is round. "Reality," therefore, is not an absolute. It differs with the group to which the individual belongs. [103, page 57]

time of the varying modes of human adjustment and their psychological significance as manifested in different human societies.

Criteria for Personality Tests Useful in Anthropological Research

But how are we to go about securing reliable information of a psychological nature that will enable us to compare one group of people with another? Is it satisfactory to rely upon deductions from descriptive cultural facts for information on personality dynamics? How is it possible to make sound generalizations about the personality organization of a whole group of people without adequate samples of the personality structure of a representative number of individuals? Can we obtain a representative sampling by interview methods and autobiographies? How are central tendencies or typical personality constellations to be understood without an empirically established range of variability? And what about patterns of ontogenetic development? Is it possible to use personality tests among primitive people that will give valid results? And what kind of tests are **available?**

Some of these questions and others are still under discussion. There is no reason to assume that from a general methodological point of view, field techniques other than projective techniques are not appropriate to culture and personality studies. Other techniques have been used, but I am not concerned with them here. Once we raise the question, however, of the use of tests it is necessary to recognize the fact that, if they are to be employed at all, certain requirements must be met that are not necessarily equivalent to those upon which primary emphasis would be put by specialists in the testing field. Pragmatic considerations alone limit the range of choice. *(Reference to the perennial question of validity and reliability has deliberately been omitted, since debate ranges so hotly on this matter.)* However, the fact that the clinical validity and pragmatic values of projective tests insure their everyday use in our society, makes it seem perfectionistic on the part of any anthropological field worker to insist upon even higher standards before a test is considered ap-

propriate for his purposes.) The following points sum up the basic requirements of a test that is appropriate for use in culture and personality studies cross-culturally: *

It must be a test that is (1) both on theoretical and practical grounds not "culture bound" and (2) practically adaptable for use among non-literate peoples. This latter criterion means that the field conditions under which it has to be administered can seldom, if ever, be as rigidly controlled as in a psychological laboratory, or even to the extent that is possible in a clinic. Besides this, it must be possible to motivate easily the responses of any individual, and it must be borne in mind that interpreters may have to be used. Yet, at the same time, it must be possible to maintain a sufficiently high level of standardization in administration to make the results obtained from different groups of subjects comparable. In addition (3) it should be a test that is applicable to children as well as adults, so that information about developmental patterns in the group can be investigated and compared with other groups, and (4) the results must lend themselves to group characterization as well as provide data on intragroup variation in personality patterns including the possible identification of psychopathological syndromes. It was such considerations that initially led to experimentation with the Rorschach test among non-literate peoples and, since subsequent use appears to have substantiated so many of its assumed potentialities, it is intelligible not only why it was the first projective technique to be tried among such people but why it has been used more widely than any other.¹

* What follows is a restatement, with a slightly different emphasis of the main points to be found in Hollowell: 60; Cf. Henry and Spiro: 2, who cover essentially the same ground.

1. An article designed primarily for anthropologists that discussed the use of the Rorschach technique in culture and personality studies up until that time was published by me in 1945: 60. Another review and general discussion was published by Abel: 1 in 1948. Cf. Lantz: 100, 1948. In 1952 Henry and Spiro prepared an inventory paper on psychological techniques in anthropological field work for the International Symposium on Anthropology. See *Anthropology Today*. They tabulated all the published Rorschach material under the categories of the purpose of the investigation, the size of the sample, results obtained, and so on. Besides the Rorschach, they list the following projective techniques as having been used among non-literate peoples: TAT, Free Drawings, Doll Play, Bender Gestalt.

Cultural Variables, Perception, and the Rorschach

The rationale of the use of the Rorschach test in culture and personality studies is likewise becoming clarified on theoretical grounds. Rorschach theory, as well as that underlying other projective tests, has been based on the general assumption, as MacFarlane and Tuddenham have stated it,* that "every subject's responses are not the consequence of sheer accident, but are *determined* by psychological attributes of that subject." [109, page 33] On the basis of this assumption no new principle need be introduced if we say that *among* the selective determinants are those derived from the subject's *group-membership* relations, and that such determinants may be thought of as varying from one people to another. Group-membership relations are those that link the subject with other individuals of the same socio-cultural system (or sub-system) and, at the same time, distinguish him from individuals of other groups. Components of the personality derived from this source are integral to the responses of the individual in the same way as those that may characterize him at one age level as compared with another, or those that are derived from the influence of unconscious conflicts and repressive mechanisms. It is only by initiating group comparisons, however, that the nature and character of similarities and differences of this order can be identified or defined. Exclusive preoccupation with questions of individual variability within any one socio-cultural system can never lead to the formulation of problems that focus attention upon the range and variation of man's psychological adjustment in a comprehensive *human* perspective. Although only a small beginning has been made, this is the basic orientation of personality and culture studies. Historically, it is interesting to note that, despite the fact that the Rorschach test was originally devised as a clinical instrument for individual diagnosis, the potentialities it appeared to offer for the investigation and comparison of group differences in modal person-

* In this paper I am making use of this traditional assumption as a working hypothesis and am therefore not concerned with the critical appraisal of the three corollaries discussed by MacFarlane and Tuddenham.

ality structure constituted one of the reasons why it attracted the attention of anthropologists.*

Furthermore, evidence indicating the extent to which the expression of group membership characteristics is actually *implicit* in Rorschach protocols became apparent in a few scattered comparisons of subjects from different nationality groups in Europe made quite independently of the investigations of anthropologists. Once the fallacious identification of "race" and "nationality" is put aside, such studies can be seen to belong in the same general frame of reference as the personality and culture studies of anthropologists. National differences imply sub-cultural differences, defined by political affiliation within the larger whole that we speak of as western culture. The question then is whether there are not psychological correlates that can be formulated as differences in "national character." One example is the comparison of Spanish and English refugee children published by Tulchin and Levy.† One of the most striking points

* In this connection it is worth noting that the same potentiality of the test has been exploited simultaneously for studying various groups of subjects in our culture. In 1945 Munroe stressed the fact that this was a somewhat novel development. She wrote:

Until recently Rorschach examiners themselves have concentrated almost exclusively on individual clinical diagnoses. The rapidly increasing number of studies using the test as an instrument for the investigation of more general problems should soon awaken more interest in its potential resources for such purposes. Methodologies for group comparisons are still in a formative stage, but promising results have been obtained. [118, page 31]

It is significant that in citing, by way of illustration, Hertz's studies of personality development in adolescence, Ross' analysis of "the psychological components in migraine and neuro-circulatory asthenia" etc., reference is made to Oberholzer's analysis of the psychological characteristics of the *People of Alor* (DuBois [42]), and that Munroe likewise observes that "it is precisely in these wider applications that the Rorschach can *eventually* prove most useful to general psychology." [118, page 31]

† Tulchin and Levy write:

Some of the above differences agree to a great extent with what we know of the Latin and Anglo-Saxon temperaments. The supporting evidence of the Spanish and English children studied by Maza and Kerr before the war points in the same direction and leads us to believe that the differences we found are due, at least in part, to national and temperamental differences in the two groups. To what extent the war experiences of our groups of children accentuate these differences is difficult to say. It is quite likely that the more intense and more traumatic experience of the Spanish group of refugee children has made its mark and plays a part in the dynamic personality structure as disclosed in the Rorschach findings. [153, page 368]

stressed by these authors is the *continuity* in the differential patterns that distinguish two groups of children they observed, when compared with previous studies made before the war, by others, of *non-refugee* children of the same national groups. What is the explanation of this continuity? While the authors attribute it to "national and temperamental difference," in the terminology employed here, the observed differences may be a function of cultural variables, being an expression of group membership differences in personality structure.

In other words, *if* it be assumed that personality structure is, in large part, a product of training, experience and psychological integration that is directly related to the cultural variables that constitute the individual's group-membership situation, and *if* it be assumed that reliable information on personality structure can be inferred from the manner in which the subject responds to the stimuli presented by the Rorschach figures,* *then* it must be granted that the data obtained in this way are psychologically significant in relation to the individual's group-membership status and culture background, as well as to age or sexual differences and whatever peculiar or distinctive idiosyncratic traits may be manifest. For, in terms of personality and culture theory it is assumed that a human being always thinks, feels, perceives and acts as a socialized *person* who must inevitably share psychological characteristics with his fellows in order to be capable of interacting *predictably* in interpersonal relations with them in an ongoing socio-cultural system. The perceptions of the individual, then, must be anchored in the same meaningful world as theirs or else perception could not function effectively in relation to action. It is in relation to this fundamental fact that Rorschach theory and personality and culture theory approach a common focus. Besides this, the revived interest in the investigation of perception in a more inclusive frame of reference† enables us to

* I have in mind here the critical discussion of the three corollaries which MacFarlane and Tuddenham [109] maintain are implicit in the general assumption involved in the use of all projective techniques.

† Bruner and Postman, for example, contrast an older view in which a stimulus object was "merely something to be seen, heard, touched, smelled or sensed" with one that treats perception: "... in a broader behavioral context. For its primary concern is with the manner in which perceptual functioning is imbedded in and interacts with

appraise with greater clarity the psychological consequences of cultural differences and suggests why it is that responses to the ambiguous stimuli of the Rorschach figures, obtained from people with varying cultural backgrounds, are both comparable and diagnostic. Bruner, in fact, has pointed out that "the case can be made that Rorschach implicitly provided the axiom around which the first chapter of a dynamic theory of perception must be built. It is a simple one: 'the principle that every performance of a person is an expression of his whole personality'—perception included." [28, pages 157–158] *

Recent studies of perception have dealt with the determinative importance of those variables "which derive primarily from the needs, moods, past experience, and memory of the individual," in contrast with "autochthonous" or "structural" factors "derived solely from the nature of the physical stimuli and the neural effects they evoke in the nervous system." [97, pages 81–82] † The former category of

other psychological functioning. Perception is viewed as an instrumental activity." [30, pages 14 and 15]

* The quotation within the quotation from Bruner is from White, "Interpretation of Imaginative Productions." [164, page 228] In concluding this article Bruner says:

It seems apparent that Rorschach methodology and the interpretation of Rorschach responses are closely linked to the development of perceptual theory. Perceptual theory, in the past so neglectful of personality dynamics, has on its part the task of contributing a fuller understanding of why such techniques as the Rorschach have been so successful. The future will perforce witness the coalescence of research on perception and research in diagnostics. The two belong together. [28, page 167]

† See likewise the *Symposium* in the *Journal of Personality*, Volume 18 (1949), and Blake and Ramsey. The latter phrase the matter as follows:

. . . perception refers to those interactions between an organism and its (necessary) environment in which the form of response is governed by the *signal* or *sign* significance as contrasted with the *energy strength* or *quality* or *pattern* of the stimulus configuration itself. In these cases the signal or sign significance of the stimulus comes to exist (either spontaneously or effortfully) as an emergent from certain specific previous organism-environment interactions of the individual. Responses in this restricted aspect of the total gamut of interactions, then, are always *indirect*: the reaction is not governed solely by the energy characteristics or performed pattern of stimulus-neural configurations; it is determined by the meaning the individual's prior experience has "given" to the stimulus configuration (i.e., the conceptual set or assumption, or personality configuration, or schema defined as an emergent from prior perception). [23, page 5]

With explicit reference to projective tests see L. E. Abt, "A Theory of Projective Psychology" in Abt and Bellak [4] .

"nonsensory," "functional" or "directive" variables in perception are, of course, precisely those which, in addition to having idiosyncratic aspects, are commonly structured and shared by individuals who have been prepared for action in a psychological field that is rooted in the same culturally constituted behavioral environment. Intervening variables of this common order of experience cannot be completely dissociated from the behavioral environment, on the one hand, or from the modal personality structure of individuals who belong to a particular socio-cultural system, on the other. As pointed out elsewhere [65] we may thus speak of cultural factors in the structuralization of perception, that is, those that are derived from the fact of group-membership. For if perception be considered in relation to action, the generic function of perception needs to be construed with reference to how the individual is prepared to behave in a world that is ordered, stable, and meaningful for him [126]. It can scarcely be maintained that the human being undergoes perceptual adjustment to an abstract world-at-large, or without being influenced in any way by the experience of others. On the contrary, the objects of his world and their properties are those that become ordered and meaningfully defined for him by the kind of discriminations, classifications, concepts, qualities, and values emphasized by his culture.

Furthermore, the world of objects thus defined is not restricted to objects that can be identified by material, tangible, or sensible properties in the geographical environment. Perception functioning in a socialized human being compels him to act in a world that is neither purely "objective" nor purely "subjective." It may be a world in which the "natural" objects of a behavioral environment like our own may be endowed with "non-natural" qualities or forces. It may be a world in which, through traditional forms of conceptualization associated with defined qualities and imagery, reified objects of various categories (gods, deceased ancestors, mythical animals, and the like) may not be conceptually discriminated from those of any other class. Culturally reified and symbolically represented objects, in short, have functions that are directly related to the needs, motivations and goals of the self. They are an integral part of the psychological field of the individual and must be considered as relevant variables because they can be shown to affect

actual behavior.* It is not enough, therefore, to say that people differ in their belief systems; they live in different perceptually structured worlds. Thus, while it may be said that the individual is compelled to act in an objective world, it cannot be inferred from this fact alone that man's behavior is not influenced by perceptual experiences that are a function of other than "autochthonous" variables.†

The kind of perceptual problem we have presented to us in the human species, then, is a complex one; but it does not involve a choice between purely psycho-physical determinants on the one hand, and personal or cultural relativism on the other.‡ Recognition of the influence of cultural factors in perception does not imply that the *human* world of one people is psychologically disparate from and therefore absolutely incomparable with that of another—any more than deeply rooted individualistic factors in perception imply any absolute psychological disparity between one person and another. But what is implied is a system of interdependent relations between learning, the structure and functioning of the human personality, and the dynamics of perceiving.§ Thus perception as psychological process has a generic aim or function related to what Bartlett long ago referred to as an "effort after meaning" [13] which is integral with the functioning of the human personality everywhere, however the latter may be structurally varied in relation to the meanings defined by different behavioral environments or to personal adjustment.||

* It is unnecessary to invoke any novel principle to cover such data among "primitive" peoples. Referring to an even broader range of phenomena MacLeod points out: "Purely fictitious objects, events, and relationships can be just as truly determinants of our behavior as are those which are anchored in physical reality." [113, page 205]

† Cf. Blake and Ramsey [23, page 5] with reference to the perceptual errors to which individuals are prone when tested under experimental conditions.

‡ Cf. the remarks of Else Frenkel-Brunswik in Blake and Ramsey [23] pages 373-375.

§ Bruner argues that "a theory of personality . . . cannot be complete without a complementary theory of perception, and, by the same logic, one cannot account for the full range of perceptual phenomena without broadening perceptual theory to a point where it contains personality variables." [29, page 121]

|| Cf. Hilgard: "Perception is not a passive process of registration . . ." [but] "an active process of interaction between organism and environment. Perception is an achievement. As in the case of other achievements, it is regulated and given direction by what the organism is trying to do." [80, page 103]

One of the general propositions we can deduce from these assumptions is that in those instances where stimuli are in any sense ambiguous, the ambiguity will be perceptually resolved in meaningful terms that are related to the object content of the behavioral environment and to the personal needs of the individual in the situation. In actual life situations this means that individuals with different cultural backgrounds (1) will tend to structure ambiguous stimuli with the same objective properties differently, (2) that the meaningful character of their responses will give us information about the objects of their behavioral environment, and (3) attitudes towards such objects may be revealed. I have illustrated this point elsewhere [65, pages 181, 182]. In one case, marks on a beach, interpreted as the tracks of the Giant Frog, caused a party of Ojibwa Indians to depart at once, although they had expected to camp there for the night. The Giant Frog was a threatening figure in their behavioral environment. In the other instance, an Indian structured auditory stimuli heard when he was alone in the bush as indicating the presence of a cannibal monster (*windigo*), the most threatening figure of all for the Ojibwa. In both cases perceptual cues were the sensible source of the definition of a situation whose meaningful character was a function of the behavioral environment of these Indians and in terms of which there was a pressing need for flight. Responses in such ambiguous situations serve to highlight concretely the integral relations between perceiving, thinking, feeling, and acting that characterize individuals within the framework of the cultural factors that constitute their behavioral environment.

In the case of the Indian who gave ambiguous auditory stimuli the meaning "windigo," however, it would be an error to assume any *inevitable* relationships of a deterministic order between beliefs about the existence of cannibal monsters shared by Adam with other Indians of his culture, and the attribution by him of a meaningful content to a set of ambiguous stimuli in the concrete situation described. All that can be predicted on the basis of a knowledge of the culture is that, given a belief in cannibal monsters as fearful objects in the behavioral environment, some Indians will, on particular occasions, respond to ambiguous stimuli as *windigowak* rather than

Jabberwock. That is to say, in addition to cultural factors that may enter the situation as selective determinants, idiosyncratic factors must be recognized as well. In the case of Adam, I suggested what these probably were. I also pointed out:

Adam's Rorschach record is characterized by the fact that out of a total of thirteen responses he gave a whole answer to each card. This was always his first answer and he responded with considerable rapidity. Furthermore, in this immediate interpretation of each successive blot as a whole Adam was almost unique in my series. And when I add that his wholes were not particularly good ones, I believe that the relevance of his Rorschach performance to his responses in the situation narrated is even more fully evident. His rapid but not too accurate structuralization of an ambiguous situation gave free play to the influence of traditional belief as well as personal determinants. [65, page 185]

Consequently, there appears to be clear evidence in this case of a direct analogy between the subject's response to a life situation and his performance in the Rorschach situation. Thus, as Fearing emphatically states it:

. . . organizing and structuring processes correlated with the attitude and need structure of the individual operate in *all* stimulus situations. In the case of those situations which are designedly ambiguous (the Rorschach cards might be an example) these factors have a maximal effect. At the other extreme, there would be situations, the objective properties of which would be such as to minimize, but not wholly obliterate their effect. . . . It is necessary to postulate some system of needs with which the cognitive processes of the individual in the group may be correlated. *The need for meaning* is a basic construct in this connection. It refers to the need to structure cognitively a given situation so that the individual may come to terms with it. [46, page 453]

It is this "need for meaning" when considered integrally with the functioning of perception as an "instrumental activity" that is taken for granted when the assumption is made that subjects presented with a series of ink blots can, rather simply, be motivated to resolve ambiguous forms into perceptually meaningful objects and relations. Rorschach himself noted that often subjects were astonished to find that other persons did not "see" the same thing they did. In the same way, my Indian friends would have been astonished if anyone had not identified the marks on the beach as the tracks of the Great Frog,

and no other animal. It seems to me that it has not been sufficiently emphasized that in the thousands of responses now on record from subjects with varying cultural backgrounds we have empirical support for the theory that perception always involves an "effort after meaning," as well as a demonstration that the Rorschach test is based upon a perceptual principle that is in no way culture-bound. Personally, I can recall a time when many of my anthropological colleagues expressed skepticism on just this point without, of course, taking perceptual theory into account. Could responses be obtained from people with *any* cultural background and experience?

The Universal Applicability of the Rorschach

A specific illustration of the kind of question that arose in the minds of anthropologists was whether the production of responses to the ink blots would not be greatly limited, or facilitated, in relation to the degree to which the subjects were familiar with some pictorial form of art either in their own culture or through contact with some other culture. Thus, one colleague who gave the Rorschach a trial, but without success, wrote me (1938), "They have no graphic art; a picture doesn't mean a thing to them." But then was added the dubious psychological statement, "[They] just seem to be without imagination." Jules Henry, one of the pioneers in the use of the Rorschach among non-literate peoples, was much concerned about the same problem. "Since ink blots and even pictures were strange to the Pilaga" he writes, "they had to be prepared for the test over a period of months by being shown as many pictures as possible. They were also given the opportunity to see trial blots and experiment with interpreting them." [132, page 680] The assumption that the best orientation to the blots is by a picture analogy is illustrated in a recent investigation of a group of Canadian preschool children [113]. The instructions given followed those of the Brush Foundation except for the fact that the word *picture* was substituted for *design*, as it was thought that it would be more intelligible to most

of the children. In other words, since most children in our culture are deluged with pictures, the picture analogy appears obvious, or even necessary, as a means of orientation to the blots.

Although the northern Ojibwa subjects that I began to test in the summer of 1938 were adults, and I knew that most of them were at least superficially familiar with pictures, I determined to make use of a trial blot as a matter of standard procedure. My initial instructions included the statement: "I am going to show you some cards, one after another. These cards have *marks* on them, something like you see on this paper." The Ojibwa term that I have translated "marks" was deliberately chosen because it *did not* have the connotation "picture." I thought it might confuse the subjects if they thought that the blots were some new-fangled, strange and confusing "pictures" of the white man and that what they were expected to do was to figure out what was "there." But I soon found that the trial blot was unnecessary and abandoned it. And I have not heard of anyone who has made a systematic use of a trial blot in collecting the hundreds of protocols from non-literate subjects that have accumulated in subsequent years. On the other hand, I later found a trial blot useful in testing children, especially those at the youngest age levels. If I had used it more systematically from the first, I feel sure that the high percentage of rejections of Card I by children 6 to 9 years of age would not have occurred.*

Thus, while many problems may arise in the use of the Rorschach among non-literate groups, I believe that most of them are of an administrative nature. We may assume that the task can be performed if it is understood and sufficiently motivated. But problems of this order must not be confused with the nature and potentialities of the Rorschach technique itself. The possibilities of the latter cannot be fully realized or appraised unless problems of administration are solved. But we must be aware, of course, of what these problems are. Strangely enough, there are no discussions of administrative problems in print by anthropologists who have used the test nor, to my knowledge, have such individuals ever met in conference to compare

* See Hertz [73] and Ford [47] on the trial blot.

notes on this score.* Nevertheless, the futility of *a priori* judgments on points such as those referred to above is illustrated by the experience of Melford Spiro in Micronesia (1947). Despite the fact that the people of the tiny coral atoll of Ifaluk have no pictorial art in their own culture, and were besides unfamiliar with pictures in the Euro-American sense, his subjects had no difficulty whatever in giving meaning to the Rorschach blots. On the other hand, when the same subjects were presented with a series of *actual* pictures, paralleling the standard TAT set but rendered in the form of line drawings and specially prepared for use among the peoples of Micronesia, certain problems did arise.†

Thus the Rorschach blots do not have to be seen as *analogous* to "pictures." If this were true, in a literal sense, then the presence or absence of a pictorial graphic art in the previous experience of the subjects might be relevant. But this is not a prerequisite. People can see the blots or parts of them as "like" something, or they can see something "there," once they are oriented to the task and sufficiently motivated to make an "effort after meaning" in response to the kind of stimuli confronting them. Anna Hartoch Schachtel and the Henrys make this acute observation:

Pilaga children see in the Rorschach plates an immediate picture of their objective world. They look for an exact copy of reality, as if they were looking through the wrong end of a telescope; they look for actual forms, and for the positions which the forms of animals or the body assumes. *What they see is real to them.* With us, both children and adults say of the plates, "This looks *like*," or "this looks *as if*." For the most part we are aware of the fact that we are interpreting the picture and are abstracted from the object perceived. Pilaga children do not have this feeling about the plates. They say "it *is*." [132, page 681]

The situation that confronts the subject when presented with the standard TAT cards, or their equivalent, is perceptually distinct. In

* Abel [1] does discuss some of these problems.

† There were eighteen plates in this series prepared by Dr. William E. Henry. The field work of Spiro and others was carried on under the auspices of CIMA (Coordinated Investigation of Micronesian Anthropology) organized by the Pacific Science Board of the National Research Council and carried out with the coöperation of the U.S. Navy.

our culture we are so familiar with various kinds of graphic symbolization that we can usually identify objects without hesitation, even though color may be completely abstracted and other natural perceptual qualities only represented in a highly conventionalized form. Certainly line drawings involve a fairly high degree of abstraction and conventionalization. In making use of the TAT it is ordinarily assumed that the subject is able to identify various classes of objects which are represented in a graphic form. Most of them are not intended to be ambiguous. The subject makes his identifications and goes ahead with his story. In contrast with the Rorschach situation, therefore, one might suppose that familiarity with pictures would be a *sine qua non* for the interpretation of TAT cards. What is of particular interest, then, is that most Ifaluk subjects, despite their lack of experience with pictures, were able to identify *correctly* almost all of the object content of the line drawings of the TAT cards.*

The special difficulties they encountered are particularly instructive because they point to basic aspects of the functioning of human perception in relation to experience, as well as to man's generic potentialities for responding to symbolic forms. Concretely, the perceptual difficulties these subjects experienced may be exemplified as follows: (1) In two cards (6 and 18) they could not identify any of the objects represented; these pictures were completely unmeaningful. (2) In certain other cards they failed to identify certain objects—for example, the depiction of a fire by a few lines indicating pieces of wood and ascending smoke (Card 8) and simple lines, with no shading, representing the trunks of trees. (3) Human figures, on the other hand, were identified easily but clues to sexual differences seemed to depend on clothing. (4) Perspective was not grasped by the subjects in all instances—objects drawn above one another were seen as being above one another and not in spatially receding planes (a canoe, represented by the artist as being *in* a native canoe house, was seen as being *carried* by men standing in the foreground outside the house). In short, the difficulties that had to be overcome in interpreting these pictures appear to be precisely those that would offer *no* difficulties

* Spiro also collected a large number of drawings despite the fact that most of his subjects had never handled a pencil before.

to subjects familiar with the conventions of graphic symbolization in our western art tradition. This deduction is empirically supported by the fact that in parts of Micronesia where considerable acculturation has taken place, including acquaintance with pictures, subjects exhibited very few of the special perceptual difficulties of the people of Ifaluk. This is illustrated by an examination, for instance, of 17 protocols collected by James L. Lewis * during his stay in Kusaie. Here the natives had been converted by American missionaries in the nineteenth century; they had even become Sabbatarians and celebrated the Fourth of July. These subjects gave responses to Cards 6 and 18, although a few vocalized their initial difficulty with the latter. The fire was identified in Card 8, and in only a single instance were the men seen carrying the canoe in Card 3. On the other hand, although the people on Card 15 were identified and talked about, the trees were omitted in practically all instances. What is so remarkable then is the actual success with which the Ifaluk subjects in their "effort after meaning" *transcended* their culturally rooted limitations. This fact, along with the relative ease with which they informed the Rorschach blots with meaning disposes, I think, of any *a priori* judgments in regard to the use of projective techniques among non-literate peoples deduced from the presence or absence of particular culture traits, such as some form of graphic art. So far as the Rorschach is concerned, the raw data necessary for interpretation can be elicited because a universal function of human perception is exploited.

Comparative Productivity in Different Cultures

This hypothesis receives support from the empirical data on the actual productivity of subjects drawn from peoples with varying cultural backgrounds and from many parts of the world. Such data were not available even a few years ago. When I referred to this matter in

* Mr. Lewis, now employed in the Trusteeship Division of the UN, participated in the CIMA project under the sponsorship of the University Museum and the Department of Anthropology at the University of Pennsylvania, where he was a graduate student.

1945 I had to rely exclusively on the figures available for a few Alorese subjects * and the Ojibwa Indians. If we now turn to both published and unpublished information, we find that our data have increased many-fold. As a sample of the material now extant from additional American Indian groups and peoples in the Pacific, note the figures found in Table 1 (page 490) in which 1676 subjects are represented. By way of comparison with American whites, for whom we likewise have some fresh information, I have included the Spiegel sample of adults, Gardner's nurses, and a calculation based on the Ames sample of American children. The figure refers only to subjects 6 to 10 years of age for purposes of a better comparison with the means for child subjects in other than white American groups.

If Table 1 be examined with Beck's criteria [15, page 272] of Medium 20-30 responses), High (35 and up), and Low (15 or less) productivity in mind, it will be seen at once that not even American adult subjects *average* High. It is likewise interesting that in only four of the non-American groups do adult subjects produce an average of less than 15*R*. And it seems quite likely that the productivity of the adult subjects in widely separated regions of the world and with diverse cultural backgrounds is in the *Medium* category for the most part. It will be noted, furthermore, that most of the mean figures for the groups represented fall within the range defined for American adults by the Spiegel sample, on the one hand, and Gardner's nurses, on the other.

How far variations in productivity may be a function of test administration, or of cultural values related to motivation in the test situation, or of personal adjustment at different acculturation levels, remains to be investigated. While the Ladinos and the Guatemalans of San Jilotepeque rate low, the Mexican Indians of Tepoztlan were more productive. "Among our adults," write Abel and Calabresi, ". . . 15 out of 42, or roughly one-third, gave 20 or more responses. . . ." [104, page 310] And in connection with this comparison it is interesting to note that the subjects of Ifaluk, an isolated

* DuBois [43, page 590] where Oberholzer gives the total number of *R* given by males. I have divided this figure by the number of male subjects (17). Unfortunately, no comparable figure is given for the 20 female subjects.

TABLE I *Mean Productivity of Selected Groups*

PLACE	GROUPS*	SOURCE	NUMBER OF SUBJECTS	MEAN RESPONSES
United States	Spiegel Sample: Adult whites	Beck, Rabin, <i>et al.</i>	157	32.65 (SD. 17.68)
	Gardner Nurses: Adult whites	Gardner	100	22.0
	Ames Sample: White children (6-10)	Ames, <i>et al.</i>	235	16.9
	White children (Chicago)	Thetford, Molish, Beck	155	27.15 (SD. 14.05)
Canada	Tuscarora Indians (Iroquois): Adults	Wallace	69	27.9
	Ojibwa (Berens River): Adults	Hallowell	102	27.0
	Children	"	49	18.3
	Kaska (B.C., Yukon Territory): Adults	Honigmann	19	22.16
Mexico	Children	"	9	15.5
	Micmac (Cape Breton Island): Adults	Steen	72	14.6
	Tepoztlan: Adults	Lewis	42	16.2
	Adolescents	"	25	16.8
Guatemala	Children (5-12)	"	39	18.7
	San Luis Jilotepecque	Billig, Gillin, Davidson	31	12.5
	Male Ladinos (11-75)	"	36	11.0
	Male Mayan Indians (10-78)	"	36	11.0
Polynesia	Samoan Males (16-27)	Cook	50	29.0
	Cook Is. (Aitutaki) Children (7-15)	Beaglehole	88	23.0
Micronesia	Saipan			
	Chamorro: Adults	Joseph and Murray	30	23.1
	Children	"	100	13.6
	Carolinian Children	"	100	12.7
Ifluk: Adults		Spiro	110	14.1
	Children	"	41	13.9
Dutch East Indies	Alor: Adult Males	DuBois	17	29.1

* Unless otherwise specified, both male and female subjects are included

group of Micronesians almost completely unacculturated, were more productive than the Guatemalans. In the case of the Ojibwa, the average *R* for 115 adult subjects of both sexes at Lac du Flambeau, Wisconsin, [64] was 17, as compared with 27 in the less acculturated Berens River Ojibwa, reported in Table I. Since the Ojibwa represent an instance in which there is evidence that the acculturation process, as shown in the Lac du Flambeau sample, has resulted in a great deal of psychological maladjustment, the correlation of relatively low productivity with this known fact suggests a relation between productivity, considered as a group phenomenon, and a general level of socio-psychological adjustment. This hypothesis needs testing, of course, but Spindler's study of the Menomini Indians is extremely pertinent in this connection. He used objective criteria as a means of systematically discriminating the acculturational status of five different groups of individuals and then obtained a Rorschach sample of each group [139]. The most highly acculturated group of Indians on the reservation—the elite in socio-economic terms—were the most productive (average 27 *R*). They were also the best adjusted group of Indians. On the other hand, the least acculturated Menomini were the least productive (average 16.5 *R*). The other groups ranged in between. Although it would be a misleading oversimplification to assert that all these Indians except the elite group are as disturbed as the Flambeau Ojibwa, it is my impression, nevertheless, that the general level of psychological functioning they represent is lower than that of the Berens River Ojibwa. It is this northern Ojibwa group, moreover, that was as productive as the elite Menomini. Why? Possibly because in both cases, despite differences in acculturation level, the social-cultural conditions requisite for the emergence of a relatively healthy level of personality functioning were present. I mention these facts only in order to pose a problem, not to offer a solution. But it does seem that the average number of *R* for various groups may be psychologically significant and that they may offer clues that deserve more careful investigation.

Despite the low mean productivity in a few groups we now have unequivocal evidence that lack of productivity is no bar to the cross-cultural use of the Rorschach test. What is equally impressive is the

fact that this statement needs no qualification with respect to child subjects, even at lower age levels. I found, for instance, that despite the fact that my series of 25 Berens River children (6 to 10 years) showed a much higher percentage of card rejection than the American children of comparable age in the Ames sample, the mean *R* for the Ojibwa children was 17.7 as compared to 16.9 in the latter group.

A special point of general interest is brought to a new focus in the tabulation. As Ames and her collaborators point out in their review of the Rorschach literature on children's responses, "Despite wide variation in reported *N* for the different studies, the general trend with increasing age is definitely an upward one." [6, page 21] This implies, of course, that the productivity of adults may be expected to be greater than that of children. The samples of American adults and children published by Beck and his associates offer a specific illustration. This differential productivity is precisely what we also find in four out of the five groups in Table I, where this information is recorded for people with other cultural patterns. Since these groups include two samples from Micronesia, on the one hand, and two American Indian groups with different cultural backgrounds, on the other, a much broader base is established for the general hypothesis derived from Rorschach data on children in western culture only, that productivity increases with maturation. On the other hand, the Tepoztlan figures provide an outstanding exception.

Content Categories in Cross-Cultural Perspective

The more crucial questions that arise in any cross-cultural use of the Rorschach test turn on the comparability of *what* is seen and *how* it is seen by different peoples, whether the responses have the same psychological significance everywhere, and especially, the validity of group differences as an index to culturally determined differences in "modal" personality structure—the "communal" aspects of personality, or however it be phrased.

It seems to me that it is not only possible for human beings to "see" the blots as meaningful objects but that *what* is seen is com-

parable in a *human* as well as a cultural and idiosyncratic sense. In the first place, the variations in the responses obtained are customarily ordered for analysis and comparison relative to the limits set by the objective attributes of the figures, on the one hand, and general content categories, on the other. The objects named are seen on the Rorschach cards in a particular locality, with reference to qualitative features of the blots, and so on, and at the same time, they can be classified in a limited range of categories. Since the content categories now in use are at a fairly high level of generality—human beings, animals, nature, objects, and the like—with some possible elaboration they can be adapted for transcultural coverage. A much more important point, however, regarding the comparability of content categories is suggested by certain empirical data that have emerged from the cross-cultural application of the Rorschach. It has long been emphasized that most responses of both children and adults fall into only two major categories [16, Vol. I, page 196]—Animal ($A + Ad$) and Human ($H + Hd$). Klopfer says, for example, that “at least three-fourths of the responses of most subjects deal with human beings and animals; the number of categories in which the other responses could be designated is small.” [91, page 171] It has been observed, furthermore, that the proportionate number of R within these two categories, in the case of normal subjects, has a characteristic range: 10–15 $H\%$ 35–50 $A\%$.^{*} A limited amount of cross-cultural data on the mean incidence of these two categories in different groups of subjects naturally raises some interesting questions: Do such categories maintain any constancy when such comparisons are made? What kind of variations occur?

In Table 2 (page 494) information is tabulated from two widely separated regions of the world—North America and Micronesia—where data are available on six groups of native peoples. Fortunately, we have some information on children, as well as adults, in both regions. For this reason, I have included a calculation made from the Ames sample of American children, limited, however, to subjects 6 to 10 years of age.

^{*} See, for example, Ames and others [6, page 279] “Normal Expectancies of an Adult Rorschach Record.”

TABLE 2 *Mean Proportion of Human and Animal Responses in Selected Groups*

PLACE	GROUPS*	SOURCE	PER CENT <i>H + Hd</i>	PER CENT <i>A + Ad</i>	PER CENT TOTAL
Micronesia					
	Saipan	Joseph and Murray	23.7	48.1	71.8
	Chamorro: Adults	"	19.7	49.3	69.0
	Children	"	20.7	45.2	65.9
	Carolinian children	"	9.0	18.7	27.7
	Ifaluk: Adults	Spiro	8.0	17.3	25.3
	Children	"			
North America (Canada)					
	Ojibwa (Berens River): Adults	Hallowell	29.0	48.0	77.0
	Children	"	24.0	52.0	76.0
	Micmac (Cape Breton Is.): Adults	Steen	12.0	74.0	86.0
	Kaska (B.C., Yukon Territory): Adults	Honigmann	16.0	62.0	78.0
	Children	"	18.0	50.0	68.0
United States					
	American children (6-10 years)	Anes, <i>et al.</i>	14.8	46.4	61.2
	" (6-17 years)	Thetford, Molish, Beck	—	47.95	—

* Both male and female subjects included in all cases.

It will be seen at once, that in all groups except the Ifaluk: (1) a large majority of all responses fall into the H , $Hd + A$, Ad category; (2) this holds for children as well as adults; (3) the proportion $(H + Hd) : (A + Ad)$ shows some constancy, despite variations from group to group, such as the very high $A\%$ in the American Indian groups reported and what appears to be a higher proportion of $H + Hd$ responses in some groups, than is expected of subjects in our culture.

The constancy of such predominant content categories not only lends empirical support to the comparability of Rorschach responses cross-culturally, but at the same time one cannot escape the implication that this fact must reflect some common psychological characteristic of the dynamics of human adjustment. And if we ask: What are the most significant classes of objects with which human beings everywhere interact? I believe it must be replied: human or human-like, or animal or animal-like, beings. Certainly the most active and vital orders of being in the behavioral environment of man are of the human-animal order, even though the line between the two may not be drawn on the same grounds in all cultures—as in those, for instance, where metamorphosis is considered a possibility. However this may be, it seems to me that the predominance of the human-animal category can be no accident. If it can be assumed that the major content of the Rorschach test reflects the modes of responses to the most vital objects of the human behavioral environment everywhere, this in itself is a psychological fact of importance in relation to which variations, patterns, and qualitative differences in such responses should be of interpretative significance on a comparative basis.

Variability in object content involves selective factors, of course, which are assumed to be psychologically significant with reference to the personal experience and psychological structure of the subject. But it is taken for granted in using the Rorschach in our society that the concrete objects, relations and events perceived by the subject are drawn from a large pool of objects and events that are more or less familiar in the experience or imagination of everyone. Consequently it need hardly be argued that when we move from one peo-

ple to another the responses of individuals with different cultural backgrounds may be expected to refer to the specific object content of their behavioral environment considered as a whole, aside from individual peculiarities. Of greater importance is the fact that the qualities attributed to objects, their utilitarian or æsthetic values, and their culturally defined association must be thoroughly understood. A number of years ago Jules Henry, in preparation for the interpretation of Rorschach protocols obtained from the Pilaga, prepared a tabulation of the flora and fauna known to these people. He annotated each item according to its utility value in the culture; for example, food—whether if eaten it was thought to cause harm, or was considered a delicacy, and so on. Other annotations referred to the attitude of the people toward animals—whether an animal was feared or thought ridiculous, whether it played a prominent role in mythology, or whether its name could be used as an insulting epithet, and whether it had strong associations with sexual activity [71, page 233].

In human perspective, therefore, (1) object content in the Rorschach will vary with group-membership as well as individually, and (2) the limits of any individual's choice will necessarily bear some relation to the range, nature, valence, and qualities of the objects defined by his culture. In other words, the behavioral environment of the subject must be understood in detail if the full psychological relevance of selective factors of a cultural order are to be appraised. The negative aspects of the problem are relatively simple: Animals unknown in the behavioral environment cannot be represented in the responses; neither can unfamiliar reified beings. And without the presence of X-ray photographs or topographical maps in a culture, Klopfer's *k* response cannot be given concrete manifestation in terms of this particular content. If the intellectualization of anxiety is to be inferred from a record the cue must be derived from some other content that is meaningful to the subject. While no dogmatic conclusions should be drawn, the remarkably low *A*% of the people of Ifaluk requires comment here. In this case, it may very well be that the complete absence of any wild mammalian fauna on the atoll is of determinative importance. The only mammals known to them

are the domestic dog and the pig. The predominant fauna known are fish, some insects, many kinds of lizards, and a few birds. It is important to note, however, that their largest content category is "nature," comprised of natural objects other than animals.

The positive side of the matter is much more complex. Klopfer points out, for example, that ". . . it happens surprisingly rarely that the professional background determines the choice of content to any extent, and when it does happen it usually indicates that the subject is clinging to his professional interests as a support for his personal insecurity." [91, page 215] There are selective factors at work in the choice of object content that do not permit us to infer a simple one-to-one correspondence between perceptual experience in life activities and the content of responses to the Rorschach figures. It is the inferred presence of these personal variables, in other words, that makes the occurrence of anatomy responses of psychological significance, rather than professional training or experience. The same principle, I think, can be applied to the cultural aspects of the behavioral environment of groups of individuals. When I was planning my initial use of the Rorschach among the northern Ojibwa I drew up a prospectus [56]. At that time I thought that their $A\%$ might turn out to be a function of the fact that they were "professionally" a hunting people. Actual investigation proved that this was not the case, and we now know that non-hunting peoples like ourselves or the people of Saipan have a comparable $A\%$ in relation to $H\%$. In effect, this is the question that Dennis raises, without offering any solution. Referring to my own material, he writes:

The recognition, on the part of the Saulteaux [Ojibwa], of Rorschach cards as figures previously seen only in dreams is in line with the importance given to dream experiences among these people . . . in other words, it seems probable that many of the Rorschach peculiarities of a given group could be accounted for in terms of the usual experiences common to that group. [37, page 156]

Although I did not give the actual figures in the published articles to which he refers, the fact is that only 2 per cent of 3684 responses (adults and children) can be thus classified. Dream experiences, even though so highly evaluated and reflected upon by these Indians, did

not result in the *reporting* of dream images "seen" in the blots by most subjects.* The Ojibwa do not ordinarily talk about their dreams. Such events are considered by them to be actual experiences of the self in interaction with superhuman beings (*pawáganak*) in the behavioral environment who bestow power, which may be lost if referred to lightly, or casually, or in a "profane" situation. Consequently, I did not expect to find dream images elicited by the Rorschach figures. Although one man did remark that he saw "some things" that he could not mention, I have no way of knowing, in general, to what extent dream images were perceived but not verbally reported. But this situation does serve to illustrate the importance of giving consideration to any cultural factors related to motivations that lead to the suppression of perceived content in a verbalized form. A broad analogy in our culture would be the perception of, but hesitancy in verbalizing, sexual content. The mean sexual responses in the Spiegel sample was 0.03 [18]. In the case of the Ojibwa I originally expected a much freer verbalization of sexual content than actually occurred. This opinion was based on impressionistic observations of conversational freedom in so far as sexual matters were concerned, and on certain episodes in mythology and folklore. But anatomy and sexual responses together only amounted to 0.01 per cent of the responses of adults. Though I shall not attempt any over-all explanation, further reflection on this point leads me to believe that a more detailed and systematic analysis would show that sexual references among the Ojibwa are, in fact, highly channelled in conversation. Only when the individuals involved are in certain definable kinship relations (cross-cousins of opposite sex) is any freedom permitted. Theoretically, at least, the person administering the Rorschach in this society would have to be in the proper relationship to the subject in order that any sexual references might be freely expressed. It is no simple matter to relate the behavioral facts of daily life to Rorschach responses in a manner that has genuine psychological meaning.

* The statement made in my 1941 article, which was written before I had made a quantitative analysis of content categories, was that "in quite a few instances reference is made to dream material." [57, page 241]

On the whole, I believe it is reasonable to assume that the full significance of *what* is "seen" and reported by any subject cannot be accounted for without taking into consideration the total psychological field that is constituted for him and his fellows as members of an ongoing socio-cultural system. At the same time, knowledge of and experience in any behavioral environment, or a segment of it, does not fully account for, or alone determine, the content of an individual protocol. In principle, such considerations are in harmony with Rorschach theory, in so far as the assumption is made that *all* responses involve selective factors that must have reference to the personality viewed as a functioning whole. If personality is conceived as a product of a socialization process in which differential cultural factors are an inherent and necessary part, there can be no conflict between Rorschach theory and personality and culture theory. In fact, the considerations mentioned above only serve to emphasize the paramount importance of personality structure as the focus of selective factors that involve integral relations between culture and personality in all perceptual experience.

To ignore the influence of these complex intervening variables is to oversimplify the relation between experience and perception, not only with reference to what is "seen" in the ink blots but also to the interdependence in life situations of culturally constituted values, perceptions, motivations, and affective responses of the individual. Thus, even at a superficial level of analysis, inhibited verbalization to any kind of content in the Rorschach may be taken as a direct clue to certain aspects of the relations between the value system of a culture and the circumstances under which anxiety or other affective responses may be aroused in the individual members of that culture.

M Responses and Affective Values

It has become increasingly apparent in the use of the Rorschach test that the affective value, as well as the cognitive aspects, of the content offers interpretative possibilities, although Rorschach him-

self did not develop this feature of the test.* While it is true that when hesitancy or avoidance in naming content becomes apparent we have direct behavioral clues to the affective value of particular kinds of content, it is "on the assumption," as DeVos phrases it, "that underlying tensions in the affective structure of an individual determine the affective value of a percept as well as its more formal characteristics," [39, page 133] that a wider, deeper, and more systematic basis for interpretation is possible. And it seems to me that the psychological implications of this aspect of content may be fruitfully explored in inter-group as well as inter-individual differences. Abel and Hsu in their study of Chinese in America point out, for example, that

the ways in which human beings are imagined and perceived in the blots, that is, the kinds of human beings they are and, more particularly, the ways in which they appear to be acting or behaving, especially when two figures are seen opposite each other, give us some insight into the ways in which the subject taking the test conceives of other people in relation to himself, how he feels towards others and/or how he considers other people's reaction to him. Attitudes of hostility, friendliness, wariness, fear, dependency, may be expressed by projecting such attitudes into perceived blot figures. [3, pages 289-290]

Their subjects were (1) China-born males, (2) China-born females, (3) American-born (Chinese) males, and (4) females of the same category. It was found that "it is in the kinds of human beings perceived and in the manner in which these people are described that we obtain the clearest picture of differences in our four groups." [3, page 290] There was a particularly striking contrast between China-born and American-born females. In the *M* responses of the former

* See Bell [19, pages 128-130] and, in particular, Schachtel [132], Lindner [105], Elizur [45] and DeVos [39]. Beck lays particular emphasis upon this fact:

It is in the sphere of content, therefore, that important research in the Rorschach test still lies before us. The structural dimensions give us a measure that tells us what the person is. The content, when we know more about it, will tell us where he has been, and to what he has been exposed. [17, page 118]

It should also be noted that the dynamic character of cognition, generally speaking, has not been traditionally recognized by psychologists. See the article by Heidbreder (1945) entitled, "Toward a Dynamic Psychology of Cognition." [70]

there is not a single instance of two human beings "attacking or moving aggressively against one another." In the latter groups there are 25 per cent of the *M* responses "where aggression or fear of aggression is expressed or at least indicated, either through attack, implied threat, or through an authoritarian or evil figure." [3, page 291] The authors point out that

the aberrant position in Chinese culture is to express hostility, while in the United States it is deviant for a male, and to some extent for a female, at least an adolescent one, not to show some outwardly aggressive behavior. "Acting polite," "to think and look" fit into rules of proper conduct as envisaged by Chinese culture. Thus, it is the American-born Chinese girls who approach to a greater degree the accepted American pattern than do the American-born Chinese males. But in so doing they seem to have conflict . . . [3, page 292]

A preliminary analysis of the *M* responses of my northern Ojibwa (Berens River Saulteaux) subjects indicates an overwhelming incidence of people sitting, standing, lying down, watching, for the most part without reference to any kind of social interaction whatsoever. In the Inland group (the most aboriginal in culture) 82.3 per cent of the *M*'s of adult subjects exhibit this characteristic content, the figure for the people of the Lakeside band (the more acculturated group) being somewhat less (72.5 per cent). For the children, it is the same, the response given by one child—"two men trying to rob each other"—being unique. If one were to venture the prediction from these Rorschach data that the typical personality structure of these Ojibwa is one that involves the suppression of aggressive impulses and that to express them probably leads to considerable anxiety, this would be quite correct. Any expression of overt hostility is not only discouraged by their culture but does not in fact occur, except in cases of drunkenness.* On the surface, these people present a picture of amiability and placidity. None the less, aggressive impulses do find expression—covertly. One mode of expression is malicious gossip. The other major mode is sorcery. A latent wariness, therefore, lurks behind their sitting, lying, standing, and watching. Anxiety tends to color interpersonal relations—especially between

* For further details see Hallowell [55].

men—since some overt act may be *interpreted* as hostile and lead to retaliation through sorcery. It can hardly be expected, then, that people such as these would give a human content to the ink blots characterized by highly active or aggressive human figures seen in any involved relations with each other. But what is “seen” reflects quite accurately qualitative and affective aspects of interpersonal relations, not just as observed but as sensed.

These examples are sufficient to indicate in a preliminary way some interesting possibilities that suggest themselves when the content of Rorschach responses is pressed beyond the purely cognitive level and when group characteristics are made the focal point of inquiry. It may be added that any direct symbolic interpretation along Freudian lines, without detailed reference to the cultural setting, would be hazardous at this point even though it seems likely that there may be universal symbols that are functionally related to recurrent interpersonal situations and the operation of the same unconscious mechanisms in all mankind. Since Klopfer has advised caution in the interpretation of the content of the protocols of individuals in our culture in these terms, this caution should be redoubled when the records of persons with a different culture background are under consideration.*

Popular Responses in Cross-Cultural Perspective

An aspect of the content of responses that comes into immediate prominence in any cross-cultural application of the test is the scoring of *P* and *O* responses. Unlike *M* and *C* responses, “Populars” and “Originals” cannot have comparable significance for interpretation unless they actually represent what their symbolization implies—recurrence, on the one hand, and unusualness of responses to certain areas of the cards, on the other. A criterion of frequency is necessary, no matter what other criteria may be used.† Although it is an ele-

* Salter [130] referring to Klopfer.

† For a discussion of the different frequency criteria used in scoring *P* in the history of the test see Hertz [75]. Actual quantitatively established norms for the scoring of *P* responses for different groups of subjects in American culture are recent developments.

mentary point, the possibility of distinguishing *P* and *O* responses is based upon the expectation that in any group of subjects responses essentially similar in content will be given to the same parts of the blots by many subjects whereas other responses, even if recurrent, will be much less frequently given, and still others will be so very unusual that they will occur not more than once in one hundred times (the usual frequency definition of *O*). Thus, we can expect the same kind of distribution in other cultures as in our own, although the empirical data have only been worked out in detail in a study of the Ojibwa I published ten years ago* and in the more recent statistical analysis of *P* responses in a series of Haitian protocols by Erika Bourguignon and Emily Nett [26].

The diagnostic significance of *P* has been characterized in various ways: "Intellectual adaptation to collective thinking," "the subject's participation in 'collective thought,'" "coöperativeness," "the ability to participate in common thinking or wish, hence adaptability," "intellectual rapport with the world," "the ability and need to think and feel as part of a group," "ability to adjust to a group," "the ability to adjust to the practical requirements of life, to a sufficient participation in collective or common thinking." [75, page 3] What this means in generalized socio-psychological terms is that a normal human being is expected to manifest indications of a level of functioning that involves social and psychological participation with others in a common socio-cultural system. In terms of variability in personal adjustment, however, some individuals may be over-conformed or pseudo-conformed while others may tend to deviate very far in the opposite direction. Too few *P*'s, therefore, may be one index to a schizophrenic adjustment, where the private world of the individual tends to overwhelm him and separate him from his fellows. Excessive *P*'s may likewise be diagnostic.† Since these general considerations

See, for example, Beck [16, Volume 1], Hertz [79], Ames [6]. For quantitative data on Original forms see Hertz [79].

* See Hallowell [59] for the Ojibwa. In this article I was able to make use of a preliminary study along the same lines made by Dr. Dorothea Leighton for Navaho and Zuni children.

† Beck writes:

The popular (*P*) response has been correctly evaluated as a measure of the ability to recognize the most common percepts of one's milieu. It points, therefore, to con-

apply to all societies, *P* and *O* responses so scored have an actual reference to frequencies established for the group. Consequently, I should suppose that schizophrenics in any society would give fewer *P*'s than normal subjects.

The central question, then, is: *What* are the *P* frequencies for particular groups? The corollary questions are: Do we have to assume a unique and characteristic *P* frequency for subjects that differ in age, educational background, and national affiliation, within the gamut of the Western European and American cultural tradition itself, as well as for peoples who do not belong to this tradition at all? Or, are there some *P*'s of "universal" frequency that transcend particular groups in our culture, and are even found among some nonliterate peoples? * At present we do not have available the range of empirical or quantitative data that would be necessary in order to give a definite answer to such questions; nevertheless, they can hardly be ignored considering the widely extended use of the Rorschach beyond the confines of our own culture. The issues that have arisen within the more limited social framework of our own society are only compounded in this larger perspective. Besides this, such questions have implications beyond those directly related to practical and diagnostic problems. The nature of the test itself and the comparability of results that emerge from cross-cultural usage are involved.

An examination of Table 3 (see pages 506-507) indicates the kind of problem arising when a comparison is made: (1) between the developmental aspect of *P* forms in a small group of northern

formity in the thought content . . . Schizophrenics score low *P*; they do not share their communities' thoughts . . . Low *P* is found in some adult neurotics as a rebellion symptom at the conscious level . . . [16, Volume 3, pages 24-25]

In some homosexuals *P* is low; in others, very high. Beck interprets the latter as camouflage, "a defensive effort to cover up the non conventional sexuality by being very conventional in everything else." [16, page 25]

* Klopfer points out:

The value of establishing such a group frequency for any concept is undeniable. However, it does not detract from the importance of the concept of *universal frequency*. To every Rorschach expert who has seen records from many different groups it is rather surprising how many concepts even the most divergent groups have in common. Thus, it seems worthwhile at least to aim at the establishment of a universally representative frequency distribution of concepts. [91, pages 177-178]

Ojibwa (Saulteaux) children (14 boys and 11 girls, 6 to 11 years of age) and the much larger group of American children (4 to 10 years of age) studied by Ames and her associates; * (2) between the *P* responses of 49 Ojibwa children (30 boys and 19 girls, 6 to 16 years of age) considered as a whole and 102 Ojibwa adults (66 male and 36 female). † A criterion of one in six was used in both series. A further comparison is also possible (3) between the *P* forms of Ojibwa subjects established quantitatively and the *P*'s of American subjects, other than the children in Ames' series, that have been quantitatively determined.

In the first place, in both groups of younger subjects there is a corresponding *P* to Cards II, III, V, and VIII and again a negative correspondence in the case of Card VI. Any *P* forms among the Ojibwa corresponding to "mask" or "pumpkin" (I) is ruled out *a priori*. There are no masks or pumpkins in the behavioral environment of the Ojibwa, so that these objects cannot be associated in any way with "faces." Since "winged creature" (bird, bat, butterfly) does rate as a *P* form for the Ojibwa children as a whole, its absence at the lower age levels may be connected with the fact that Card I was the one most frequently rejected, especially by subjects 6 to 9 years old. Most of these came from one locality (Inland) where the children were extremely shy. It is striking to observe, however, that a total of seven *P* forms established by Hertz [79, Table II, page 9] are not only found among the American children but likewise among the Ojibwa children 6 to 11 years of age. Five are the same in both groups; two differ ("face" I and "spider or crab" X are only produced by the American children while "animal's head" IX and "tree" VIII are produced by the Indian children).

The differences between the two groups of children are particularly interesting cross-culturally. The many-legged animal (X side blue: spider, crab) that is rated *P* by Klopfer, Beck, Hertz, and others for adult subjects in our culture appears at the earliest age level in the sample of the American children but is completely absent as a *P* at all age levels among the Ojibwa. On the other hand,

* Ames [6, page 40]. The list of Popular Forms has been reproduced in our tabulation.

† Further details will be found in my article on *P* responses among the Ojibwa [60].

TABLE 3 *Popular Responses of American Children Compared with Ojibwa Children and Adults*

CARD	AMERICAN CHILDREN (AGES ET AL) AGE IN YEARS		OJIBWA (SAULTEAUX) CHILDREN (HALLOWELL) AGE IN YEARS			OJIBWA ADULTS	ORDER OF FREQUENCY * (ALL OJIBWA)
	4-6	7-10	6-7	8-11	6-16	16 UPWARDS	
I	Bird, butterfly, bat Face, mask, pumpkin	Bird, butterfly, bat Face, mask, pumpkin			Winged creature (11)	Winged creature (5)	7
II	Two animals: dogs, bears Elephants	Two animals		Animal(s)	Animal(s) (3) Human figures (11)	Animal(s) (2) Human figures (13) Butterfly, D1, K (14)	2 12 [18]
III	Two four-legged animals Bow, ribbon, tie Two people	Bow, ribbon, tie Two people		Human figures	Human figures (6)	Human figures (6) Mammal with tail, D2, K (13)	5 [20]
IV	Animal (head at top) Person, giant	Animal Person, giant			Animal skin (10)	Human figure (11)	[17] [17]
V	Bird, butterfly, bat	Bird, butterfly, bat	Winged creature	Winged creature	Winged creature (4)	Winged creature (4)	4
VI						Animal skin (12)	11

VII	Dogs, rabbits	Dogs, rabbits	Clouds	Clouds	Clouds (7)	Animal head, D2, K (8) Human head, D2, K (14) Human figures or head; W, D3, 4K (14)	10 [16] [20] [19]
VIII	Animals: bears, lions, dogs, mice	Animals: static or in action	Animals Tree	Animals Tree	Animals (1) Tree (5)	Animals (1) Tree (8) Animal or animal head, d1, K (11) Animal or animal head, D6, K (13)	1 6 [16] [20]
IX			Person, D6, K	Person Animal head, D3, K	Person (8) Animal head (9)	Person (6) Animal head (6) Human head, D4, K (10) People + tree + animal, d1, K (12)	6 7 11 [17]
X	Side blue: spider, crab W: tree with flower or colored leaves	Side blue: spider, crab	Rabbit head Small mammal, D11, K	Rabbit head Small mammal Small mammal, D10, K	Rabbit head (2) Small mammal (9) Small mammal (9)	Rabbit head (3) Small mammal (7) Small mammal (9)	3 8 9

* Bracketed figures in this column indicate a frequency of less than one in six. All other figures in this column and those showing the *P* frequencies for Ojibwa children and adults refer to frequencies of one in six or more.

On the basis of this criterion there are 15 *Populans* for Ojibwa subjects of both sexes and all age groups, 23 *Populans* for adults considered as a separate group and 14 *Populans* for the children considered independently of adults. Of these 14 *Populans* 12 correspond with the *P*'s of adults; 9 of the adult *P*'s do not correspond with the *P*'s of the Ojibwa sample taken as a whole.

the famous Rorschach "rabbit" (X), rated *P* by practically all experts, is a typical *P* at all Ojibwa age levels. In order of frequency it falls into third place for the entire group of subjects. In this case, it may be added that the animal itself is a very familiar object in their behavioral environment. Likewise "clouds" VII is a Beck *P* and "person" IX is quite close to, if not identical with, the *P* forms recognized by Hertz. "Tree" VIII was formerly listed by Beck [16, Vol. I, page 194]. Consequently, the only *P* forms peculiar to Ojibwa children are the small mammals (*D* 10 and 11, X, Klopfer). In the developmental picture represented by this group these forms anticipate two *P* forms that rate fairly high in the Ojibwa group considered as a whole. There is one obvious conclusion to be drawn from these facts alone: Ojibwa children in their choice of *P* forms are not unique when compared with white children, or even with adolescent or adult subjects in our culture.

Ontogenetically as well as cross-culturally, it is likewise of considerable interest to note (1) that all of the 11 *P* forms in the 8- to 11-year-old Ojibwa group have the highest order of frequency among the children as a whole; (2) that with the exception of "clouds" VII, which does not attain *P* frequency among adults, and "winged creature" I, which is *P* for adults but not for the two youngest groups of children, the 10 other *P* forms of *greatest* frequency among adults are precisely equivalent to those found in the 8- to 11-year-old children; and (3) that the 4 *P* forms with the top frequencies among *both* children and adults ("animals" VIII; "animals" II; "rabbit" X; "winged creature" V) are among the best known *P* forms in general Rorschach experience. They are among the *P*'s that Hertz found three or more experts agreed upon [75, page 18]; and Schneider [135, page 19] out of the background of his German experience, likewise recognized them (using a criterion of 1 in 4). In other words, these 4 *P* forms are in a category that transcends age differences, national differences, and cultural differences in so far as they are now known to occur among children and adults in more than one nationality group in western culture and in comparable sub-groups of the Ojibwa Indians.

A further series of comparisons with five other American Indian

groups (see page 510) with varying cultural backgrounds not only indicates that "Animals" VIII and "Winged creature" V are Populars, but that they are among the Populars that occur with the highest frequencies in all these groups, the former never falling below second place. "Animals" II, while ranking between 2 and 4 in frequency in all but the Shoshone group, never occurs as the most frequent *P*. "Rabbit" X is about equal in rank with "Human Figures" III; in both cases there are two groups in which neither response falls among the 5 most frequent *P*'s and, in the groups where those responses are high in frequency, neither one rises to higher than third place. Furthermore, of the 15 *P* forms having a frequency of 1 in 6 or more in the total Ojibwa sample 11, or possibly 12, correspond to those quantitatively established by Hertz (1951) and 9 of them to those defined in a similar manner by Beck (1944) for American subjects.

At the same time it should be noted that the adult Ojibwa, considered as a unit, have a total of 23 *P* forms. This can hardly be without psychological significance. Both in winter and summer these people live in small face-to-face groups characterized by the limited range of social roles that are defined by the traditional kinship pattern. Besides this, the Ojibwa are hunters; especially in winter, a band, comprising only a few families at most, will be isolated on their hunting grounds for months at a time. The high number of *P*'s may be an index to the correlation that exists between manner of living and the conformity to a highly homogeneous pattern in psychological outlook. From a developmental point of view this hypothesis receives support from the fact that 10 of the *P* forms of highest frequency among adults are already established in children at the 8- to 11-year-old level.

These data do not permit us to assume that, as we move from one people to another, we should expect to find a totally distinct series of *P* forms in each case. On the other hand, our present empirical knowledge does not enable us to define the actual extent, or the trans-cultural limits, of "universal" *P*'s. We can only determine these limits by assembling more data on group frequencies of all kinds. By accumulating such data on a much larger scale we will be

TABLE 4 *P Forms of Highest Frequency in Six American Indian Groups with Diverse Cultures*

P FORM	ORDER OF FREQUENCY					
	OJIBWA (HAILLOWELL)	MENOMINI (SPINDLER)	TUSCARORA (WALLACE)	WIND RIVER SHOSHONE (SHIMKIN)	ZUÑI (LEIGHTON)	NAVAHO (LEIGHTON)
Animals VIII	1	2	2	2 (bears)	1	1
Animals II	2	3	4	—	2	4
Rabbit X	3	—	—	3	5	5
Winged Creature V	4	1	1	1 (bat)	3	2
Human Figures III	5	4	3	—	—	3

NOTE: Information on the Zuñi and Navaho is based upon data collected as part of the Indian Education Research Project sponsored by the U.S. Office of Indian Affairs and the Committee on Human Development of the University of Chicago, which has not yet been published in full. The frequencies based upon the records of 106 Navaho boys and girls ages 6-18, and 83 Zuñi children of both sexes, 8-18 years old, were compiled by Dr. Dorothea Leighton [101]. Although Dr. D. B. Shimkin's study [136] of the Wind River Shoshone was a pioneer investigation, carried out in 1937, it has never been published. I have relied upon a personal communication for the figures tabulated.

able to view all the types of variation that may emerge in a more comprehensive human perspective and better judge both the psychological significance and the determinants of such phenomena. It may very well turn out in the case of the *P* responses to the Rorschach figures that we are presented with a problem that has analogies to the functioning of perception generally. The "universal" *P* forms may involve determinants that are a function of objective characteristics of the figures themselves and past experience with certain "universal" classes of objects. The four "universal" *P* forms referred to above, for example, all have an animal content. On the other hand, less universal *P* forms may be more predominately subject to the control of determinants of the "nonsensory" or "directive" category. On the basis of such an hypothesis it might be expected that the responses of children in different cultures may very well include "universal" *P*'s and that group differences in *P* forms may be more apparent among adults.

Integration of Culture, Perception, and Personality Structure and Rorschach Validity

The nature of the cross-cultural data on *P* forms, the recurrent proportions of human and animal responses, the range in productivity of subjects with culturally diverse backgrounds (to say nothing of other types of evidence that might be assembled) all seem to point in a common direction. Rorschach protocols wherever collected with care exhibit constant as well as variable features which, considered as group phenomena, appear to be of the same order as the protocols of individuals within any particular group. Thus, in the light of what we now know about the psychodynamics of perception, and in view of the support which the general working hypotheses adopted in personality and culture studies have received, the comparability and psychological intelligibility of Rorschach protocols at both group and individual levels need no longer rest upon *a priori* considerations but rather upon empirical evidence that is rapidly accumulating. It seems reasonable to conclude, therefore, that *if* the meaning-

ful resolution of ambiguous stimuli is a valid means of obtaining data of psychological significance for an understanding of personality structure in one culture, the same technique is probably valid for subjects with any cultural background. So far as practical use is concerned there is no reason whatever to believe that the Rorschach test is "culture-bound," even if special administrative problems may arise. As Spindler and Goldschmidt have pointed out, it is meaningless to ask: Are Rorschach responses "culture free?" For, as they say:

. . . we do not know what this concept could mean as applied to individual action. It is precisely because the individual's responses are cast in their particular form by his culture that we use such a tool. The ink blots themselves are, or approach being, culture free (i.e. "unstructured") stimuli. The subject's responses are never culture-free. The protocol is therefore a *personal variant* of a *culturally patterned* response to a *relatively open situation*. [141, page 78. Italics in original]

This is what had to be assumed, of course, by all those who pioneered in experimenting with the test in cultures other than our own. But at this earlier period, the Rorschach test was peculiarly novel, since other projective techniques had not yet been developed, nor had the principles underlying their use been clearly articulated. It now seems more obvious, perhaps, how Rorschach data fit into the general theoretical framework that is emerging from the investigation of perception in relation to personality, culture, and personality studies, and a deeper understanding of the psychodynamics of personality. It also seems to me that the assumption that common principles of Rorschach interpretation can be applied to the protocols of subjects with any cultural background is thoroughly intelligible.

It is unnecessary to review here in full detail one of the most striking types of evidence in support of this assumption. This is the well-documented fact that a fair number of protocols have been interpreted "blind" in a *double* sense. Not only has this been accomplished without personal contacts with the subject, or a knowledge of his life history or clinical data; it has been done without explicit or detailed knowledge of the cultural background of the subject. A pioneer and classical instance of this is the interpretations made by

Anna Hartoch Schachtel of the protocols of six Pilaga Indian children. Two of the three boys were only 6 years of age; the other was only 4 years old; the ages of the girls were 6, 8, and 9 years. Besides this, the records showed a high degree of constriction; there were no *M* or *C* responses. Nevertheless, when "compared with material taken from the notes of the ethnologists on the day-to-day behavior of the same children in their own village" and doll-play results, a ". . . close correspondence between the Rorschach findings and the ethnological facts" was found despite "occasional differences in emphasis." [132, page 680]

Another instance of blind analysis is of unique interest because of the independent participation of Theodora M. Abel, Molly R. Harrower, Florence R. Miale, Bruno Klopfer and Martha Wolfenstein in the interpretation of a single record [115, page 371]. This was the protocol of Unabelin, an Arapesh (New Guinea) man about 20 years old obtained by Margaret Mead in 1932. Mead writes:

Thus a detailed study of his individual personality, by Rorschach methods, presents a way of specifying the type of personality who appears to me as an ethnological observer to be closest to the expected type for that particular culture. Seen from this point of view, Unabelin is not only a cultural sample, in the sense that any Arapesh is a sample of his culture, but he is further a particular type of sample. Ideally, such a record would be complemented by Rorschach records of those individuals considered most deviant in temperament from the culturally expected personality. [115, page 389]

Oberholzer's blind interpretation of the Alorese material collected by Cora DuBois is an outstanding instance because Oberholzer himself was so skeptical of the cross-cultural applicability of Rorschach principles. He explicitly points out that he cannot rely upon the norms he is accustomed to work with when interpreting the protocols of European subjects. And he comments further:

There are no more than thirty-seven [Alorese] Rorschachs and they are not likely to be increased in number. To work out norms we need at least some hundred or more tests, perhaps more than there are Atimelangers. There is little hope that standards will ever be established. [Nevertheless] the psychological meaning and significance of Rorschach's experimental factors have proved true for Europeans and

Americans [so that it may be possible to apply them still more widely] . . . many hours were spent assigning rank order to subjects for personality traits. The ethnographer worked from her knowledge of the individuals; I worked blind from the Rorschach materials. The degree of coincidence between our ranking was so high that it left no doubt that the principles of the test could be applied cross-culturally. [42, pages 588-589] *

Other examples could be cited, such as the chapter contributed by Abel and Calabresi to Lewis' study of the Mexican village of Tepoztlan † and the detailed interpretation of twelve male and eleven female Trukese subjects by Sarason. In the latter case the Rorschach records, life history information, and TAT records were obtained by Gladwin on Truk [53]. Although done informally, the interpretation of psychograms of Zuñi and Navaho Rorschach group results by Bruno Klopfer many years ago clearly indicated the possibility of blind interpretation at this level, too. Despite the fact that he was completely unfamiliar with either Indian group he put his finger upon characteristic differences that those who know these Indians at first hand recognized as valid.‡

A recent example of the use of blind Rorschach analysis (and TAT) is reported by Kluckhohn and Rosenzweig. The subjects were two Navaho children, a boy and a girl, who had been followed since birth. Four independent interpretations were obtained, three of

* With reference to the cross-cultural application of the test, see Cronbach [35, page 446]. McClelland says:

A rather striking and somewhat unusual confirmation of the test's validity has come from a study by DuBois and Oberholzer on the Alorese (1944). Here Oberholzer, working independently from Rorschach records alone, arrived at a picture of the basic personality structure of the Alorese which was highly congruent in most important respects with the one arrived at by an anthropologist (DuBois) and a psychiatrist (Kardiner) working with anthropological data. [114, page 147]

† Lewis [104, Chapter 13]. This interpretation might be classified as semi-blind, if any such distinction seems necessary, since the author in a footnote at the beginning of the chapter says that it was written by Abel and Calabresi [2] "prior to their reading of an earlier chapter on the people." However, they had seen three short published articles of mine, one of which dealt with inter-personal relations. In addition, they had read an early version of one of my family studies. [104, page 306]

‡ The data, unpublished, were collected as part of the Indian Education Research Project sponsored by the U.S. Office of Indian Affairs and the Committee on Human Development of the University of Chicago.

them blind. The results show a high degree of conformity. The authors comment:

The picture obtained of these two personalities by different testers and interpreters using a variety of projective techniques is, on the whole, remarkably consistent. Much of the work was done independently. In no case did any tester or interpreter have full access to all the materials which have been assembled for the writing of this paper. At most, each student was familiar with some fragment of the total data. Mr. Kaplan, e.g., had seen the interpretations of the 1942 Rorschach before he did his re-take in 1947. But this was all. The personality diagnoses made on the basis of projective tests also check well with the impressions of another set of workers who used ordinary interview and observation methods. In short, the present paper constitutes a partial validation of projective tests in another culture, with the caution that significant results are peculiarly dependent upon the relationship between tester and subject. [95, page 277]

While "blind" interpretation as a means of testing the validity of Rorschach principles is, of course, relevant to the cross-cultural applicability of the test, nevertheless, I believe it inevitably belongs to a pioneer period. In this respect it parallels similar experiments made by those interested in the clinical application of the Rorschach. So far as any serious and systematic use of the Rorschach technique in personality and culture studies is concerned, it hardly can be argued that the interpretation of the record of a single individual, of a few children, or a handful of adults, done blind and apart from a representative sample of the population as a whole (including, of course, age and sex differences) is to be recommended as an ideal procedure for obtaining reliable and useful Rorschach data. Individual protocols, even if psychologically intelligible, do not give us reliable information about the common features that characterize a group and thus enable us to appraise the typicality or atypicality of the individual within his group. The use of black and white as color and the proportions of the various categories of *C* answers in Alorese records would be quite as striking and intelligible in a single record, if that were all that was available. But it could not be known to be typical and related to their culture without further sampling. What struck Oberholzer so forcibly was the discovery that a Rorschach pat-

tern, aberrant in our culture, could be so characteristic of the Alorese records as a whole. Standing alone such a record would inevitably suggest psychopathy. Thus Oberholzer comments:

I have mentioned more than once the similarity between the Rorschachs of the Alorese and the pathological findings of traumatics, some neurotics, and some schizophrenics. The Alorese, of course, are none of these; nor are they epileptics, although their color reactions are comparable. No one of these diagnoses can hold its ground when we know everything about their tests; it is only a more or less remote analogy. The Alorese Rorschachs are something *sui generis*. [42, page 601]

However, in the last analysis the psychological characterization of the Alorese as *sui generis* depends on more than knowing "everything about their tests," in the sense of having a group sample. Such an appraisal depends equally upon knowing everything about their culture.

Important as blind analyses of a few individuals may be for certain purposes, these experiments must be clearly distinguished from investigations that are less concerned with methodological questions as such and more concerned with discovering and exploiting the full potentialities that appear to be inherent in the test results. One of the most striking and important theoretical implications of experiments in "blind" analysis has been overlooked. In so far as life history data, direct observations of behavior, information from other tests, and cultural facts have proved to be in accord with "blind" interpretations, we have much more than a validation of Rorschach principles. We have, in fact, a most enlightening concrete demonstration, in more than a single human society, of the integral relations that exist between the variables that are abstractly expressed by perception, personality structure, and culture, and which have so often been investigated separately. This is a discovery of major importance. It reflects the complexities of the human behavioral situation, the need for a comprehensive conceptual framework, and the usefulness of techniques that have already provided extremely important data.

Complementary Nature of Psychological and Anthropological Frames of Reference

Information derived from the Rorschach and other projective techniques, therefore, cannot be ignored by the anthropologist if he is interested in joining forces with the psychologist in the pursuit of a common goal—a thorough understanding of *all* the factors that enter into the determination of the behavior of man and the functioning of human societies through cultural instrumentalities. From this point of view, the information obtainable from Rorschach data may be just as significant, at the personality level, in validating the anthropologists' interpretation of the functioning of cultures, as a consideration of cultural data has proved of value to the psychologist in gaining a more comprehensive knowledge of the determinants relevant to the functioning of individuals.

One of the major accomplishments of anthropology has been to record, describe, and analyze in great detail the many and varied cultures of mankind, particularly those of the non-literate peoples of the world, and to work out the historical relations between them. Consequently, if the cultural anthropologist asks what information about *culture* is provided by Rorschach data, the answer is little or none if what is meant is specific information about technology, kinship terms, religious beliefs and practices, economic organization, and so on. In other words, if culture is conceived exclusively or primarily in formal categorical, descriptive, or analytic terms and principally dealt with as phenomenally *sui generis*, psychological data of any kind are irrelevant.* On the other hand, if the psychologist asks what

* Kroeber, for example, has clearly expressed his personal preference for this frame of reference. He writes:

The level which I have personally chosen or become addicted to is the cultural one. This is not the only way of proceeding, but it is my way, and it seems the most consistent with an integrative-contextual or "historical" approach. It is hard to judge one's self, but I do seem more consciously and singleheartedly to separate out the purely cultural aspects of phenomena and to interrelate these among themselves, eliminating or "holding constant" the social and individual factors, than, for instance, my American colleagues Boas, Lowie, Radin, Linton, Spier, Redfield, or

information cultural anthropology can offer about *how* we learn or the psychophysiology of perception, the obvious answer is none.

Nevertheless, men do typically adjust themselves to modes of group living which affect their psychological structuralization and behavior, and cultural phenomena depend upon their activities. Consequently, the approaches of cultural anthropology, on the one hand, and psychology, on the other, would appear to supplement each other. In so far as the former is interested in the functioning of human societies through cultural means and not only in the descriptive content and patterning of cultures, and in so far as psychologists are interested in *what* is learned and the relation between dependent behavioral variables and the traditional mode of life to which individuals become adjusted, a common area of interest emerges.

The focus of this area rests upon the assumptions that personality structure emerges in the course of a socialization process, beginning in infancy, that prepares the individuals for action in a given culture, and that cultures only function and persist through the personality organization of the individuals whose activities are responsible for the group attributes that distinguish one mode of human life from another. Thus predictions about a great deal of overt behavior can be made on the basis of a thorough knowledge of culture considered in its traditional and local aspects. But such inferences have their limits; the psychodynamics of behavior and the structural basis of it in depth are more difficult to arrive at from such cultural data alone. Conversely, some predictions about behavior that have significance in cultural terms may be made from the data of projective tests. But information of this kind must remain at a high level of abstraction from the standpoint of cultural anthropology. From Alorese Rorschachs alone, for instance, one could say that highly elaborate and imaginative art forms could not be characteristic of the culture. Thus the anthropologist, if he is interested in how a culture functions at the "grass roots" level, must work with psychological blinders on unless he checks his inferences from independently derived psychological data. In the same way, the psychologist working with per-

Murdock, and certainly more than Hallowell or Kluckhohn or Mead, or than British anthropologists such as Evans-Pritchard, Firth, Forde, or Nadel. [98, page 7]

sonality data in the narrow sense will be handicapped by cultural blinders if he extrapolates his conclusions beyond a certain point. Working blind, in either case, does not seem to be the most desirable procedure where complementary data may prove enriching. There is a general analogy to the clinician who does not hesitate to use all the data at his disposal in his effort to understand thoroughly the psychodynamics of his patient. The anthropologist who wishes to understand the functioning of a culture must of necessity use descriptive and historical information, but he can complement this by data derived from projective techniques. By using maximum information of both a cultural and psychological kind, our knowledge of the dynamics of culture and behavior can be considerably deepened and extended. It may be possible in the future to do more than compare and analyze cultures and culture change at the formal cultural level, or to describe and catalogue variations in personality type associated with different cultures and link them with early childhood experiences. Already it seems possible to compare different human populations with respect to the level of integral psychological functioning that is found in the typical life adjustment of the individuals in each group under the conditions imposed by varying historical circumstances.

The Rorschach in the Study of Culture Change

Investigations along these lines have been undertaken by the writer, several of his students, and the Spindlers, through using the Rorschach technique in studies of acculturation. I compared Rorschach data from *several groups* of Ojibwa Indians at progressive levels of acculturation in order to discover what has happened to the modal personality structure of these Indians, whose whole manner of life has undergone radical changes as compared with aboriginal days or even with the late nineteenth century.* The Spindlers have stud-

* See Hallowell [58, 61, 62, 63, 65, 67]; for a summary of the chief results of the 1946 field study at Lac du Flambeau, Wisconsin, see [69]. William Caudill [32] has reported the results obtained from the TAT childrens' protocols which he collected as a part

ied *one* reservation group, the Menomini Indians of Wisconsin,* in order to discover "the degree to which evidences of personality structure vary in relation to the observed variances in the more external and social aspects of the personnel of the group undergoing the acculturative process." [141, page 77] Criteria were devised that made it possible to rate individuals on the basis of a sociological variable in terms of which the population was found to be divisible into five sub-groups, "four of them along a continuum of acculturation, and one differentiated on the basis of socio-economic status." [141, page 73] Rorschach samples from all these groups were obtained, as well as from a white control group, so that a psychological variable pertaining to personality structure could be compared with the independently derived sociological variable.

All of these investigations have involved systematic sampling procedures. And it has been assumed that reliable psychological data, at the level of personality organization, could be obtained for the same kind of population units which the anthropologist has made the basis of cultural description and analysis. For it seems obvious that unless such a sample be obtained—a sample from which psychological generalizations can be made—the psychological data cannot actually be considered relevant to the cultural data nor can significant relations be discovered. Since it has been demonstrated that Rorschach data can be collected from population units for which we have the relevant cultural or sociological information and the results manipulated

of this study; unpublished Rorschach material on Flambeau children, compared with northern Ojibwa (Berens River) children, is to be found in Watrous [159] and a blind interpretation of childrens' drawings was made by Lowenfels [108]. See Victor Barnouw's independent study of the same people [12]. Stephen and Joanne Boggs, Thomas and Nan Hay, graduate students at Washington University (St. Louis), although not using projective techniques, spent the winter of 1951-1952 at Lac du Flambeau and the summer of 1952 among the Berens River Ojibwa (Manitoba, Canada) systematically studying parent-child relationships in these two groups.

For work done elsewhere under the writer's immediate direction see Wallace's study of the Tuscarora (Iroquois) [57] and Sheila Steen's study of the Psychological aspects of acculturation among the Cape Breton Island Micmac [147]. The latter made use of "signs of adjustment" as an index, so that her results are comparable with the Flambeau study.

* The experimental design of this study was set forth by Spindler and Goldschmidt [141]. The results are given in a monograph by George Spindler [138].

statistically, the methodological possibilities of projective techniques at this level offer interesting potentialities.

What is particularly significant in the Spindlers' Menomini study is not the emergence of an over-all psychological picture of the Menomini as a whole. It is, rather, the discrimination made possible by the analysis and interpretation of Rorschach data of differential personality constellations representative of groups of Indians on the same reservation who have adjusted themselves during the period of contact with the white man's culture in a variety of ways. Moreover, hypotheses were developed from socio-cultural observations that could be tested through the use of Rorschach data at the level of personality structure and functioning. One level of acculturation, for example, "is represented in the membership of the Peyote Cult, as a special variant of a transitional acculturation type." [140, page 151] It was found possible to define the socio-psychological function of the Peyote Cult in the acculturation process and, at the same time, to demonstrate a correspondence between cult membership and a characteristic personality organization of the Indians belonging to it.

The personality pattern of the adult male members differs dramatically from that exhibited in other acculturally defined Menomini groups, according to Rorschach protocols . . . Most of the women show the same symptoms and characteristics as the men, but they do not reach the same degree of pathological self-involvements as do some of the men. Even by Menomini standards, the deviant withdrawal type reactions of the men and the women find support in the group; for the cult sanctions schizoid-like behavior by the emphasis placed upon vision-seeking and autism. [142, pages 515-516]

It is concluded that:

. . . the inferences to be drawn from this for the understanding of the specifics of the role of cults of this sort in social and cultural change are important; but even more significant are the implications of this for the relationship between what have been called personality and culture, for here the two seem practically identical. [140, page 158]

Psychological Characterization and Comparison of Groups

In making over-all psychological comparisons between groups, even though it is assumed that the Rorschach data collected do constitute a representative sample, there are problems inherent in the handling of the data in a manner best suited to express their significance.* But such problems are by no means peculiar to group Rorschach data as such—they are inherent in making reliable statements about group phenomena of any sort. If the data are quantifiable and averages are used as the basis of characterization and comparison, the question always arises: How many individuals actually represent the integral combination of features that are expressed by mean frequencies? Here we should recall certain facts: (1) that group differences in the qualitative aspects of Rorschach data, as well as mean frequencies, have been shown to exist; (2) that this empirical fact is in accord with the hypothesis that cultural variability implies psychological differences; (3) that the Rorschach constellations represented do make psychological sense when interpreted in accordance with established principles; and (4) that the psychological interpretations already made of such group results have been found consonant with the known cultural information collected by the anthropologist in a number of instances [72]. Consequently, it seems fair to ask: What are these group psychological differences a function of, if not of differences in the personality structure of individuals who, however they may vary in idiosyncratic fashion from one another, share certain common psychological characteristics because they share common modes of behavioral adjustment as members of one socio-cultural system rather than another? The only alternative, it seems, is to argue that the results obtained must be an artifact of those who have interpreted the protocols, to say nothing of those who have found some accord between the test data and the cultural facts. Since this hardly seems reasonable, the real core of the problem may

* See, for example, Schafer's methodological strictures on the interpretation of the psychological attributes of clinical groups [134].

lie in the technical and methodological difficulties imposed by the nature of the data to be handled, rather than in the data themselves.

One of the questions that arise in any statistical handling of Rorschach data for purposes of group characterization and comparison is that of some possible alternative to using a profile based on mean frequencies alone. An experiment in the use of such an alternative is the study of the Tuscarora Indians by Anthony Wallace who worked out some suggestions made by psychologists Malcolm G. Preston and Julius Wishner. On the assumption that "the characteristics under investigation have their locus in the individual, where they do not exist as independent traits, but in integral relationships to one another," Wallace does not seek to answer the question: "What are the traits most frequently observed in the Tuscarora population?" but rather, "What are the most frequently associated traits?" and "What is the form of association?" For the purposes of his study, therefore, he adopts an operational definition of "modal personality" as "that type of personality structure, formulated in terms of the Rorschach test, from which the obtained Rorschach records of more individuals are indistinguishable in certain chosen dimensions than are indistinguishable in these dimensions from any other definable type." [158, page 55] The frequency of the modal class in a total sample of 36 men and 34 women, between the ages of 16 and 71, turned out to be 37.2 per cent (16 men and 10 women). Wallace tabulates the Rorschach attributes of this class and provides a composite psychogram, along with a detailed discussion that includes what he calls "sub-modal" and "deviant" types of Tuscarora personality.* For purposes of comparison, Wallace applied the same statistical analysis to the 102 adults in my sample of northern Ojibwa (Berens River) Indians. In this case 28.4 per cent fell within the modal class (16 men and 13 women).†

* See Wallace [158, page 79] for a novel graphic representation of modal type, modal class, sub-modal class, deviant class (Figure 5, The "saucer" distribution of personality variables).

† The difference between the composite Ojibwa profile of the modal class as worked out by Wallace and the profile as represented by mean figures computed by myself can be seen by comparing Fig. 7, page 96, in Wallace [158] with Table II, page 38, in Hallowell [65]. The parallel comparison for the Tuscarora is to be found in Wallace [158, Fig. 8, page 111].

It is obvious, then, that once we have a representative sample of Rorschach protocols from any group sufficient for statistical manipulation, over-all comparisons with other groups can be handled with varying degrees of refinement not otherwise possible, or the basic data can be used for various other detailed comparisons and analyses. These comparisons likewise may be made the basis of psychological inferences that have significance at the group level. This latter type of procedure will be illustrated by the comparison of selected responses obtained from two groups of Ojibwa subjects with those produced by subjects in the Spiegel sample. Such a comparison offers another angle of approach to the validation of Rorschach principles of interpretation used cross-culturally. In this case, however, group frequencies of discrete Rorschach items are the primary data, rather than the total configuration of the responses of a single individual, or the composite profile of a group of subjects, as represented by mean frequencies (or some alternative) for every type of response.

Beck and his associates, for example, have discussed the psychological significance of *H* and *Hd* responses of the subjects in the Spiegel sample. But they have gone beyond this: they raise the question whether their findings may not be "representative of the national personality." [18, page 270] Generalization at this level invites comparison with groups of subjects with a cultural background different from the American. Suppose, then, we compare *H* and *Hd* responses of "normal" adult American subjects in the Spiegel sample with those of two different groups of Ojibwa subjects, fairly similar in size and sexual composition. Comparative frequencies for these responses will be found in Table 5.

In the first place, a glance at these frequencies indicates that there is a valid basis for comparison. The general distributional pattern is the same, and four-fifths of the responses in both categories fall within the range 0-7 in the three groups. Observable differences occur within this over-all pattern. From these empirical facts, I believe it is legitimate to proceed on the hypothesis that we are dealing with phenomena of the same order in each case. If this is so, then the application of common interpretative principles is by no means an arbitrary procedure. As Beck has recently stated it:

The whole human form was noted by Rorschach, and identified by other students, as going with healthier, mature intelligence. Its absence, or low quantity in an otherwise intelligent individual, is likely to indicate repression of this theme. Hysterics produce fewer humans than others; the inference is that they are repressing painful or conflictual thoughts concerning their relations with others. [16, Volume III, page 28] [The ratio between *H* and *Hd*] is a measure of the individual's mental freedom or his inhibition. [16, Volume III, page 62]

In the interpretation of the frequency of *H* responses of the subjects of the Spiegel sample, Beck and his associates stress the fact that

TABLE 5 *Comparative Frequencies of H and Hd:
American and Ojibwa Subjects*

NUMBER OF <i>H</i> OR <i>Hd</i>	NUMBER OF SUBJECTS					
	SPIEGEL SAMPLE		BERENS RIVER OJIBWA		FLAMBEAU OJIBWA	
	<i>H</i>	<i>Hd</i>	<i>H</i>	<i>Hd</i>	<i>H</i>	<i>Hd</i>
42				1		
				0		
30-31			1	0		
28-29			0	0		
26-27		1	0	0		
24-25	1	0	0	0		
22-23	0	0	0	0		
20-21	1	0	0	1		
18-19	0	0	0	0		
16-17	1	0	1	1		
14-15	2	0	3	4		1
12-13	0	2	8	1		1
10-11	4	0	2	1	1	2
8-9	8	5	4	7	0	2
6-7	20	10	10	7	3	2
4-5	38	18	22	8	8	11
2-3	46	41	23	30	24	21
0-1	36	80	28	41	79	75
Total	157	157	102	102	115	115
Mean	4.50	1.78	4.5	3.4	1.3	1.6
	(N = 157)	(N = 156)	(N = 101)	(N = 101)	(N = 115)	(N = 115)
SD	3.62	1.95	4.07	4.16	1.43	1.78

67 per cent of them "concentrated in the 2-7 range" and 37 per cent in the 4-7 range. They write:

The offhand interpretation would be that 67 per cent show moderate to much interest in other humans; and 37 per cent definitely much. On the other hand, there are 36 individuals, or 22.8 per cent whose *H* range is 0-1. This percentage may be the proportion in which, in the population generally we find men and women not caring much about their fellows: not too allocentric. [These findings] are of fresh import in the light of the findings in the *C* nuances. [mean ΣC 3.11; *CF* 1.44; *FC* 1.18]. The indication in the affective sphere is for a composite personality more self-gratifying than social, but with relatively little infantilism. The self-gratifying trait still includes an urge for human contact; even though this contact is on the "what's in it for me" level. In addition, it will be noted from the *C* figures that a sympathetic, helpful readiness also forms one considerable sector of this composite whole personality. One may speculate, in so far as these findings are representative of the national personality, that the Americans can be well disposed, easy-going; but with a low threshold of irritability toward their fellows . . . Since the mean *H* is so noticeably higher than mean *Hd*, the inference would be for a relatively uninhibited state of mind; a relaxed attitude. [18, pages 269-270]

For a further comparison of the American sample with the two groups of Ojibwa subjects, Table 6 shows the number and percentage of subjects whose *H* responses fall within the three ranges stressed by Beck and his associates in their interpretation of American subjects.

The most striking difference is between the Flambeau Ojibwa and the Chicagoans, with whom they are essentially in polar contrast. The percentage of subjects in the 2-7 range is less than half that of the Spiegel sample, the proportion in the 4-7 range is only a fourth as great, and the percentage of individuals who only gave 0-1 *H* responses is three times that of the Americans. Besides this, the ratio between *H* and *Hd* responses tends towards reversal. While the mean figures barely suggest this, the fact is that 33.1 per cent of the Flambeau subjects produced more *Hd* than *H*. But a concomitant fact has psychological implications: The striking contrast between the two groups is not exemplified in the frequency of mean *Hd* responses; these are approximately the same. It is the paucity of

TABLE 6 *Range of H Responses in Samples of American and Ojibwa Subjects*

RANGE OF H RESPONSES	GROUPS OF SUBJECTS					
	AMERICANS		OJIBWA		OJIBWA	
	SPIEGEL SAMPLE (157)		BERENS RIVER (102)		FLAMBEAU (115)	
	N	%	N	%	N	%
2-7	104	67	55	53.9	35	30.4
4-7	58	37	32	31.3	11	9.5
0-1	36	22.8	28	27.4	79	68.6

H responses in the Indian group that is striking. When we likewise consider that these Flambeau Ojibwa subjects have a mean ΣC of only 1, whereas the American mean is 3.11, it not only appears that these Indians are very different from "normal" American subjects but in addition this question arises: Is there not an indication of some personality dysfunctioning here? The Flambeau subjects would appear to be far from enjoying an "easy-going" relationship to their fellows, or manifesting a "relaxed attitude." On the contrary, they would seem to be suffering from severe and deep-seated inhibitions in their interpersonal relations as compared with the Chicago-Americans. One might ask then: Is this psychological characteristic a function of the cultural differences between the two groups? Do we have evidence here that supports a relativistic conception of normality? Are we confronted with a peculiarity of Ojibwa personality? We might not be able to discuss this question at all, or even go very far astray, were it not for the fact that data from another Ojibwa group, the Berens River Ojibwa, are available.

While the cultural and linguistic background of both groups is the same—in this regard, they may be said to constitute a unit in contrast to the Spiegel sample—nevertheless situational differences in their recent history to have led to divergent social and economic readjustments that have had influential psychological effects. The full range of detailed factual material is set forth elsewhere, but the crux of the matter is that the Flambeau Ojibwa of Wisconsin have been subjected to much more contact with Western culture than have the

Berens River Ojibwa of Manitoba. In anthropological terminology the former are more acculturated than the latter. The northern group is much closer to an aboriginal mode of life, despite their contacts with white men. What is particularly interesting to observe, then, is that the *H* and *Hd* responses of the Berens River Ojibwa, while assuming a somewhat *different* pattern than that of the Chicago-Americans, do not suggest dysfunction any more than do those of the normal white subjects. Mean *H* is not only greater than *Hd* in both cases; it turns out to be the same as in the American sample if one highly deviant subject is omitted in calculating the average. Mean *Hd*, however, is more than twice as high. An inspection of Table 6 indicates two things quite clearly: In the first place, the lower percentages of the Berens River subjects, as compared with those in the Spiegel sample, in the 2-7 and 4-7 range, and the higher percentage in the 0-1 range suggest that these northern Ojibwa are not in such easy rapport with their fellow men as are the Americans. What is of special significance is the paradoxical fact that, while the mean for all human responses ($H + Hd$) is even greater than in the American sample, showing a preoccupation with human relations, at the same time the high *Hd* suggests that an inhibitory factor is likewise functioning that qualifies and limits this human interest. The affective aspect of this situation is indicated by the very low mean ΣC in the Ojibwa group (1.2) which is less than half that of the American subjects. Thus, while the Indian pattern is distinctive, it is certainly no less healthy than the American one. It is thoroughly consistent, moreover, with the total psychological picture we obtain when all the Rorschach determinants are taken into account—a highly introversive adjustment. While all the socio-cultural facts that are characteristic of Ojibwa life cannot be discussed in full detail here, they offer empirical validation of the inferences drawn from the Rorschach data.

The social life of the Ojibwa has often been characterized as "atomistic"; the individual is brought up in a manner that encourages a high degree of reliance upon himself rather than upon other human beings. In this culture, in fact, individuals are highly motivated to place reliance upon the superhuman beings of their

behavioral environment; each man has his personal tutelaries or "guardian spirits" [55, 62]. As I have already pointed out in the discussion of *M* content, suspicion bred of belief in sorcery, along with the anonymity of sorcerers, makes the individual wary of his fellow men. It is from this source, rather than from superhuman beings, that the greatest threats to life and health may come. Consequently, it is not strange to find evidence of a preoccupation with human beings, accompanied by inhibitions in free and easy affective ties with them. In the second place, an examination of both Table 5 and Table 6, without reference to the common background of the Ojibwa groups, would not suggest any connection between them. The *H* — *Hd* patterns they manifest appear to be quite distinct from one another. If the Berens River group seems to be concerned with human relations, the Flambeau group with a mean *H* + *Hd* of only 2.9 are in the opposite category. Why is this?

The explanation, I believe, is to be found in the psychological changes which the Flambeau Ojibwa have undergone under the pressures and frustrations of accelerated acculturation. Their *H* — *Hd* pattern, which even may be interpreted as indicating hostility in human relations, is but one indication of this. These are the same subjects that I have dealt with in greater detail in my study of the psychological effects of acculturation among the Ojibwa [63, 65]. My hypothesis has been based on evidence that indicates the persistence of an aboriginal personality structure that has surmounted earlier stages of acculturation but appears to be breaking down at Flambeau. In a comparison of the Rorschach data of this group with that of the northern Ojibwa I used "signs" of adjustment as an index to personality functioning. In the Flambeau sample 56 per cent of the subjects averaged less than 7 signs. That is, more than half of them fell into the groups I called *Poorly* or *Badly* adjusted. Consequently, I should like to point out in the comparison made above that a tabulation of mean *H* responses with references to the five levels of adjustment I used shows a progressive decline associated with a decreasing number of signs. The subjects with less than 7 signs produced average *H* responses that amounted to less than 1, whereas the subjects with 7 or more signs averaged more than 1. The subjects with

less than 7 signs were those who also tended to produce more *Hd* than *H* responses. It was only in this group of subjects, moreover, that the *A* per cent averaged over 50 (52.5 per cent in the case of those with 4-6 signs and 68.9 per cent in those with 0-3 signs.) Thus evidence from all directions points to the dysfunctioning of a large proportion of the subjects in the Flambeau group as compared with their culturally related kinsmen in Canada.

The comparison of the Flambeau sample with the normal subjects of the Spiegel sample, on the one hand, and the less acculturated Ojibwa sample, on the other, demonstrates the effectiveness of interpretative principles used cross-culturally. The Flambeau Indians are as badly adjusted psychologically, when compared with their Canadian cultural relatives, as they are when compared with the subjects of the Spiegel sample. Thus, I believe that a general conclusion of first importance can be drawn. It does not seem necessary to reinterpret our standard of mental health, when we move from one group to another, if we take as our criterion an *optimum level* of psychological functioning. In other words, what has been interpreted as evidence of psychological dysfunctioning in one group of subjects is based upon the same principles that in the other groups point to a level of psychological functioning that may be characterized as approximating mental health. For our present-day knowledge, imperfect as it may be in some respects, makes it necessary to differentiate a positive, higher, or optimum level of psychological functioning or psychodynamic adjustment (call it what you will) from a lower or less positive one. Mowrer has suggested *integrative* as contrasted with *non-integrative* behavior. Whereas the former is more psychologically rewarding than punishing, the latter is balanced in the opposite direction since adjustment is achieved "only at the expense of partial psychic self-destruction." * If we accept any such distinction,

* Mowrer and Ullman [117, pages 84 and 86]. Mental health as a functional concept does not necessarily find its antithesis in the concept "mental disease." Marzolf concludes that there is no need for the term "mental disease." "Disease is not an important concept in physiology; 'syndromes of dysfunction' is a fully adequate expression. 'Syndromes of dysfunction' is adequate for psychology too." [112, page 219] In other words, the *optimum functioning* of a human being, considered as an integral psychological whole and in his socio-cultural setting, is implied as a standard of judgment. Cf. Brewster Smith's discussion of "optima" of mental health [137].

on the assumption that it is scientifically grounded and empirically verifiable, then it would seem to follow that mental health (or an equivalent concept) is not culture-bound but has universal significance both as a concept and a value. If this be so, then it may be possible to emerge from the chrysalis of an elementary cultural relativism. We should not close our minds to the possibility that, from the standpoint of the psychodynamics of human adjustment, different cultures may vary significantly as more or less efficient instruments in the molding of personalities that are fully capable of functioning at a level of mental health. If we adopt this as our hypothesis we have indicated to us another angle of approach to the investigation of human societies in cross-cultural perspective and the psychological effects of culture change and acculturation. Here the Rorschach and other projective techniques appear to provide the most useful psychological tools.

The results of the Spindlers' investigation of the Menomini are again in point here because the contact of these Indians with whites has led to the emergence of psychological characteristics in the most highly acculturated group that indicate a sharp break with the past and a level of personality integration which, in terms of mental health, is in marked contrast with what was found among the Flambeau Ojibwa. It is particularly significant that the personality structure of the least acculturated Menomini and the less acculturated Ojibwa are quite similar. [139, page 207] According to my own hypothesis this is to be explained by the fact that both these tribal groups have their historic roots in the same culture area of North America (the Eastern Woodlands) and spoke languages which, although quite distinct, belonged to the same linguistic stock (Algonkian). But the Menomini, living on a reservation four hundred square miles in area, are unique among Wisconsin Indians in their economy. They own and operate "a thoroughly modern sawmill and logging industry, which cuts 25 million cubic feet of lumber each year and affords an annual net income of over a million dollars. Most of the adult males are employed directly in some phase of its operations." [141, page 69] In other words, it has been possible for the Menomini to become positively adapted to the American economic sys-

tem, while remaining in control of their own affairs. At the same time, the acculturation process has not completely transformed every aspect of their lives. There is a cultural continuity with the past, exemplified, for instance, by a group that maintains the old Medicine Lodge. It is a striking fact, therefore, that the psychological data assembled by the Spindlers demonstrate personality types that somewhat parallel those found among the Flambeau Ojibwa—although these are "transitional" among the Menomini—for at the most acculturated level among the Menomini where the values of the old culture are forgotten, and the goals and drives of white, middle-class (American) society find their fullest acceptance, a reformulation of personality structure occurs.

To quote Spindler:

In both structural and qualitative aspects the most typical elite acculturated personality configuration thus represents an end point of the acculturative continuum represented within the contemporary Menomini population, as contained within this sample of male personnel. The progressive shift from something that may be called quiescent stoicism, represented by the native-oriented personality configuration, through the disturbed emotionality and regressive breakdown of control functions characteristic of the Peyotists and transitionals, to the controlled and channelized emotional responsiveness characteristic of the elites, appears to be the most consistent and dramatic aspect of the psychological adaptation accompanying the socio-cultural changes represented in this synchronic continuum of acculturation. The effectively functioning self-projection, readiness to act, wide range of perceptual content, and the drives to produce numerous and elaborated concepts, characteristic of the elite acculturated configuration, are logical corollaries of this central theme in successful adaptation of the elites to modern conditions of life. The modal elite acculturated Menomini type is, in effect, a successfully adjusted middle-class American, with practically nothing logically identifiable as "Indian." This is so despite the fact that . . . all of them must have felt the impact of the old culture in some degree—simply because they grew up on the reservation and were born of Menomini parents who could hardly have been as fully acculturated as their children are now.

Despite the extensive research made with the utilization of Rorschach and other projective techniques on acculturating American Indian populations, no group has been isolated that represents a paral-

lel psychological reformulation comparable with that represented by the elite acculturated Menomini. [139, pages 197–198]

One might expect that in this group *H–Hd* responses would not manifest the same pattern as at Flambeau and that the general level of personality functioning would be higher. Thus, we may likewise conclude that the acculturation process with all of the personal readjustments to life that it implies, does not necessarily carry the seeds of psychological dysfunction within itself. The specific historical conditions, local circumstances, and other variables, are of determinative importance. While at Flambeau there appears to be a psychological impasse, and outward manifestations of acculturation conceal a psychological skeleton, on the Menomini reservation a transcendence of this situation is manifested in the case of the elite group.

It is difficult to think of any other psychological technique that would have implemented the kind of personality differentiation essential to investigations of this sort. Thus studies of the psychological aspects of acculturation have added a new dimension to the investigation of culture change. Since large-scale culture changes and personality readjustments are a prime characteristic of our contemporary world, the implications of such small-scale studies as those undertaken by anthropologists are not unrelated to the problem of mental health in general and the necessary conditions for its achievement.

Future Prospects

Finally, it seems to me that a pioneer period in the use of the Rorschach test by anthropologists, or other social scientists, is now over. I can recall occasions in the past when an archaeologist, a physical anthropologist, and several cultural anthropologists, having no technical training in psychology or in the use of the Rorschach technique, asked me whether I would not be interested in some records that they might manage to collect casually, and quite incidentally to some other specialized inquiries they planned to make. They sincerely believed that such protocols might be of some value and that with a

little instruction on my part they could no doubt obtain them. It is now more generally recognized that, if used at all, the Rorschach should be chosen as a technique that has its own potentialities, as well as limitations, and that these should be carefully weighed in relation to the aims of any particular investigation. This means that the Rorschach technique, no more than another, cannot be expected to yield positive results unless such questions are carefully considered and unless the test is made an integral part of a systematically planned and well-designed inquiry. Furthermore, those who administer, score, and interpret the test results must have a training equivalent to that of psychologists who use it. While administrative problems, including the relations between tester and testee, should be given special attention when the test is used outside our culture, these matters, like many investigations now concerned with questions of validity and reliability, lie mainly within the province of psychologists who can approach them with special professional skills. If it be thought that the data yielded by the Rorschach cannot be taken at their face value, there is no reason why the anthropologist should make use of the test. However, if the test is used, then the presentation of results obtained should conform to the same requirements demanded of those who use the Rorschach in clinical practice, or otherwise, and the results should be subjected to the same standard of evaluation. It is only in this way that the potentialities, as well as the limitations, of the Rorschach as a tool in personality and culture studies can be finally appraised.

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The Rorschach Technique in Industrial Psychology

The youthfulness of the American movement in the utilization of projective techniques in vocational settings is marked by vigorous activity, as is evidenced by our lengthy (although selected) Rorschach bibliography covering its first ten productive years. Although Rorschach investigation and writing predominate, a sizable volume of work is also accumulating on drawing, sentence completion, word association, TAT, Szondi, and other projective instruments [19, 20, 100, 104]. As the "senior member" of the growing establishment, the Rorschach technique,* because of its longer history, exhibits more fully the complexity and acuteness of the theoretical and methodological problems in this special field. (*Mutatis mutandis*, many of the implications for its application, reviewed here, are involved in deeper and wider psychodiagnostic undertakings—as in personality research, medical psychology.)

The earliest proposal for a dynamically oriented approach to occupational groupings was made by Hermann Rorschach himself [89]. He was concerned with establishing a typology, based on his "Psychodiagnostik," that would yield analyses of the energetic and structural characteristics of the personalities of artists, draftsmen, and

* The plural might more properly be used to include the large-scale derivatives of, and variations from, the original individualized technique (*vide infra*).

designers. The long hiatus between his pioneering efforts and the intense American activity in the early 1940's is bridged by Zulliger's work in Europe [14, 113, 114] and by the unpublished efforts of a number of American psychologists using the individualized technique * with subjects in selected "upper echelon" positions and job categories.† With the realization of the potential importance of the technique in large-scale employee selection, placement, promotion, counseling, and training also came the recognition of the need for group forms of administration.‡ During the first years of World War II, American, Australian, and Canadian military clinicians, influenced by dynamic orientations in personality theory, turned to projective techniques as a major source for data on personality variables. They, too, were faced with mass testing problems, but at first used the individualized Rorschach or combined it with group administrations [16, 32, 37, 91]. They began experimentation with the newly-developed "group" (handwritten) and multiple-choice forms immediately upon their publication. Almost simultaneously similar work began in civilian vocational settings.

The extent of coverage since then can be judged from a partial listing of the employment categories and vocational personalities in the

* High cost, length of time involved, and lack of trained projectivists are the major reasons for its restricted use. Some highly experimental and special forms were created to by-pass some of these obstacles (such as W. Marseilles' 16 ink blot "Mail Interview Rorschach"); but most of them are unreported. The authors are engaged in continuing work on two experimental forms [54, 55]. Others partially reported in the literature include the S.A.M. project [96], and the Harrower-Steiner ink blot series [39]. Some work has been done in the U.S. with the BERO test, but with no published work on vocational applications [14, 114].

† In addition to cost factors, it was felt that the more "complex personality structure" of executive-supervisory groups merited preferential treatment by the application to them of more subtle and individualized instruments than those used with their subordinates. Compare [6] and [20] on this development.

‡ Little work has appeared on such wider and involved aspects of industrial application as: efficiency, "service," and other rating and evaluation of "merit" and performance; absenteeism; turnover; relationship of selection programs to classification of positions; utilization of personality data in differential approaches to employee discipline practices; supervisory relationships and responsibilities; and special programs (e.g., accident-proneness, on-the-job adjustment of the handicapped; interplay of mental and physical health factors). For a résumé of one important experience in the establishment of a mental health program in an industrial setting, see Weider [108].

studies classified below.* Many of these show uncompleted research, tentative conclusions, controversial results; and, sometimes, heated rejection of all the Rorschach techniques. Nevertheless, hopefulness of successful application in the future is expressed as a dominant theme, particularly if research is done within the framework of an evaluational program derived from holistic and dynamic theories of personality.

The classification of the work done with the several positions, job categories, and professional titles includes application of all the Rorschach techniques under discussion. In some of them the Rorschach was only one of a battery of instruments and methods.

- Accountants [48, 49]
- Administrators and executives [61, 80]
 - In department stores [6, 13, 55 †]
 - Leadership aspects [32, 44]
- Advertising copy writers [100, 101, 103]
- Anthropologists [85]
- Artists
 - Commercial [4, 36, 38, 100, 103]
 - Creative [4, 79, 86, 87, 89]
- Biologists [83, 88]
- Clerical workers [38, 50, 80, 100, 101, 103]
- Clergymen [36 ‡]

* See O. K. Buros, *Mental Measurement Yearbooks* and [59, 60] for complete bibliographies on the several techniques. Sundberg [104] tabulated all test references in the former citation. The ascendancy of the Rorschach star in the history of psychometrics is attested to by his finding that since 1937 the "Rorschach holds undisputed leadership in total number of references. Its rise to a top position was very sudden and it has maintained that position. . . . The rate of publication has increased (to a point which indicates that a tremendous amount of energy (is) going into the ten famous ink blots." The recent emphasis on personality dynamics and the concomitant utilization of projective methods of investigation are highlighted in the *Fourth Yearbook*, wherein "nearly one half of the references are to personality tests, and there are more references to projective tests than to intelligence tests, projective tests which were scarcely envisaged in 1917." [104, page 151]

† Unpublished, using the Industrial Form Rorschach.

‡ The senior author is presently engaged in the selection of candidates for missionary work.

- Draftsmen, designers [89]
- Engineers [36, 80, 100, 101, 103]
- Insurance personnel [36, 61, 70]
- Machinists [5, 78]
- Medical technologists [35]
- Military personnel [1, 3, 7, 8, 16, 28, 32, 33, 37, 38, 47, 61, 62, 63, 67, 68, 91, 93, 96, 99, 105, 110, 111]
- Motor coach operators [52, 94]
- Multiform uses [10, 13, 108]
- Musicians [36]
- Nurses [31, 35]
- Paleontologists [82]
- Personnel technicians [53, 80]
- Pharmacists [48, 49]
- Physical scientists [36, 84]
- Psychologists [57, 72, 85]
- Sales personnel [13, 23, 55, 77, 100]
- Social workers [36]
- Stenographers-secretaries [101]
- Supervisors, junior executives [9, 13, 27, 61, 80, 100, 103]
- Teachers [17]
- Training program*
 - Apprentice mechanics [78]
 - Aviation cadets [16, 92, 96]
 - Clinical psychologists [57, 72]
 - College students (general) [44, 74]
 - Commercial artists [4]
 - Engineers [82, 84]
 - Merchandisers [80]
 - Medical students [71]
 - Psychiatric residents [43, 64]
 - Student teachers [42]

* This review includes selected material and references relevant to the closely related area of education and other formal training programs, but only to the extent that they bear directly on important historical or methodological developments in the vocational process. See in particular the proposals of Munroe [74], Piotrowski [76], and Zulliger [112, 113] for applications to educational processes.

Vocational guidance and related functions [49, 50, 76, 100, 106, 112, 113]

These citations will be classified in another manner (that is, according to individual, group, multiple-choice and special forms), and we will touch on the historical developments and methodologies that influenced the creation of group forms, briefer scoring and interpretation procedures, new experimental ink blots, and related devices and methods. But in doing so only the highlights can be given of the results of these studies and their major implications for continuing vocational applications.* They are abstracted from the complex literature that grew up as a result of the interaction of the several "Rorschach schools," techniques, and tendencies. Later we will summarize those theoretical and practical proposals that seem to hold out promise for resolving some of the issues, and that point toward the simplification and sharpening of the Rorschach instruments in both research and applied projects.

The Individualized Rorschach Technique

Following Hermann Rorschach's creation of the technique, its course in the United States was determined mainly by psychiatric-clinical applications. Beck's and Klopfer's leadership [12, 13, 58, 59, 60] was supplemented and expanded by the work of Davidson, Hertz, Piotrowski, Rapaport-Schafer, Schachtel, and others. With the exception of the work of Piotrowski [76,† 78] little wide-range program-

* The host of ethical and professional problems that have arisen with the expanded use of Rorschach techniques in industrial settings cannot be covered here. They stem mainly from the increased quantity, and availability, of psychodiagnostic reports derived from projective investigations. The clinician as industrial specialist faces new and delicate situations involving a re-definition of his own role: the tendencies to "discard on the scrap heap" selectees and employees screened psychiatrically; the protection of the theoretical privacy of "depth-sounding" types of materials gathered about individual employees; the role such materials will play in demotion, disciplinary action, forensic usage; and the like.

† Includes the unpublished work and suggestions of Rieti plus those of H. Zulliger [113, 114].

matic or systematic experimentation with any of the Rorschach's techniques in the vocational area has found its way into published reports. Even the very active 1940's produced only fragmentary or initiatory research, and mainly with group forms. Outstanding investigations of dynamics in occupational settings were confined to artists—for example, Prados [79]—small sample studies of supervisory personnel by Balinsky [9], and single-case investigations by many psychologists * in "live" employment situations. Military applications were, in the main, exploratory and not followed up systematically [for example, 7, 8, 16, 63, 91]. The most promising experimentation and applications invariably involved the use of the technique as part of a battery of instruments, or as part of a fuller study of individual subjects which included life and work history material: Brown, in general employment processes [22]; Hessel-Travers, in the performance of student teachers [42]; Holtzman, college leadership qualities [44]; Holt, Luborsky, and Morrow, the evaluation of the training of psychiatric residents [43, 64]; Kelly-Fiske, performance of clinical psychologists [57]; Rieger, with a variety of occupational categories [80, 81]; Ross (in combination with group techniques), psychiatric screening of Canadian Army personnel [91]; Steiner, selected cases [100]; Taylor, vocational guidance [106]; and Weider, during the installation of a large-scale mental health program in a manufacturing plant [108].

However, the published reports do not reveal the potential power of the technique when used as a device for a holistic understanding of a given subject in his total life adjustment, of which the immediate vocational task or undertaking is only a segment. They were, in the main, concerned with correlating specific adjustment criteria, as determined by raters or judges, with selected scoring factors, or complexes of factors, in the Rorschach test. At times the studies yielded descriptive statements of personality—for example, "a driving, extroensive, emotionally labile orientation" [42]. But the latter results were not the main objectives of the research, and are usually supplied as an addendum or afterthought. Only rarely is the lead of Roe followed [82, 88] in obtaining a "wide-range" understanding of the

* Known only through personal and written communications to the authors.

psychosocial determinants in professional and occupational functioning. However, a number of studies yielded optimistic prognostications of the power displayed by the individual Rorschach if used in this wide-range fashion [22, 23, 43, 80, 108].

The Group Rorschach

Although multiple-choice and other large-scale forms utilize group administration, the Group Rorschach has come to mean that variant of the individual technique in which small or large groups of subjects write their responses to ink blot stimuli that are presented either in the printed plate form, or are projected on a screen.* Harrower's pioneering [38] was soon supplemented with insightful procedural and interpretational additions by Sender [97], Munroe [74], Piotrowski [76], and others.†

At the beginning, and to a considerable extent in current work, scoring and interpretational principles established for the individual form were simply transferred to the Group Rorschach: Abt [1], and Markey and Zisson [67], in psychiatric screening of military personnel; Kaback, comparison of pharmacy and accounting students [48]; Roe, a series of personality studies of professionals [82, 88]; Ross *et al*, the selection of officer candidates, and with other military personnel [91, 93]; and Harrower-Cox [36] and Steiner [100, 102], in a variety of vocational groups.

Unique reaction patterns in the Group Rorschach, without utilizing "traditional" principles in the individual form, were established by Piotrowski *et al*, with young mechanical workers [78]. This study was not followed up except in a tangential fashion by Anderson [5]. A wider, more systematic, attempt to investigate the unique features

* In the individual form the examiner records the responses. See the manuals cited in [52, 54] for discussions of the problems in screen projection and some promising solutions.

† Particularly the work of Buckle-Cook, Hertz, Hertzman, Lindner-Chapman, and St. Clair in the *Rorschach Research Exchange* (now the *Journal of Projective Techniques*), 1942-1943, Vols. 6, 7.

of the group form was launched by Munroe in the "Inspection Technique" [74]. Based on Klopfer's scoring and interpretational formulations for the individual form, it represents an advance toward briefer, and in certain respects, more "objectified" analysis of the group form. It has been used in the exploration of personality factors among artists and designers [4, 86, 87], clerical workers [50], personnel technicians [26], and college leaders [44]. Its application to wider fields than that of vocational and employment processes is continuing.*

The first promising results with the Group Rorschach were challenged by reports of failure and near-failure. Negative findings were obtained particularly when (1) it was used as the sole psychodiagnostic instrument; (2) results were matched in a nonholistic manner with judges' ratings; (3) the psychometrically determined "sign" approach was dominant in the investigation [7, 8, 10, 32, 33, 47, 48, 61, 68, 92, 105]. Of the large number of studies that reported "failures" in the selection of military officer candidates (as an area typical of other such reports),† not one had come to grips with the dynamic-holistic issue. For example, no account was taken of the possibility that "failure" might turn into "success" if longitudinal evaluations were made [see Frank, 30]; and, except for a few specialized studies [3], the majority show a similar neglect with respect to life adjustment factors obtaining among the subjects prior to the experimentation. Perhaps the exigencies of the military situation were responsible for the use of such limited and segmental procedures; but the dominant motivation in their utilization seemed to stem from traditional influences of trait psychology, psychometric biases, blurring of the theoretical insight into psycho-social impact on the response patterns, resistance to the implications of modern thought about unconscious dynamisms, or combinations of several of these factors. As will be shown later, experimentation with a projective technique, no matter in which field of application, will

* The Inspection Technique also had an influence on the revision of the Harrower Multiple-choice Method; see Manual in [52].

† The multiple-choice instruments used in similar studies were also heavily criticized in this connection.

inevitably end in ambiguity, frustration, over-simplification, or total failure if only purely "mechanical," mathematical, or cross-sectional investigations are attempted.

This avoidance of the qualitative aspects produces a sterile, impoverished quantification, and, perforce, a distortion in the evaluation of the personalities studied. Such criticism applies equally well (a) to those researches in which stylized social histories [3], efficiency ratings [5], MMPI findings [110], and other more or less "static" and bias-laden data are used as the major criteria in the validation of projective instruments; and (b) to "sign" and related Rorschach undertakings, [as in 17, 48], which neglect the bulk of the rich and varied masses of information that can be made to flow, through qualitative approaches, from the reactions to projective stimuli. The very basis of the dynamic principles underlying Rorschach and other projective techniques is undermined thereby. Many of the "failures" [62, 68, 93, 110] cited within the course of Kurtz's strictures [61] suffer from the same fault.* His rejection of all forms of the Rorschach because they fail to act "properly" within the bounds of strict mathematical designs (no matter what is being measured or how the techniques are applied) is tenable only if one closes one's eyes to the usefulness of the more penetrative clinical approaches to understanding personality. More realistic and dynamic thinking today insists on integrating all levels of responsivity to unstructured instruments, and is particularly concerned with a better understanding of the interplay between the obvious quantitative and the more subtle qualitative phenomena within the response patterns.

* In addition, Kurtz seems to have missed in his review those items in the literature which point clearly toward promising use of Rorschach techniques in vocational settings and especially their military uses: Abt [1], Gibb [32], Linn [63], Markey-Zisson [67], Sells [96] (in earlier work), and the unpublished reports of the early 1940's cited by Harrower-Steiner [38].

The Multiple-Choice Rorschach

With the development of these techniques there could be observed an even greater proneness toward psychometrical, mechanistic, non-dynamic applications. Even Harrower's initial form [38] (10 choices per ink blot, with leeway for writing in "something else") led to similar abuse of the basic dynamic underpinnings in projective psychology. With the appearance of her 30-choice ("amplified") form, which removed the writing-in feature, this tendency was re-emphasized. Due, Wright and Wright [28], however, applied more holistic methods, using "Rorschach principles of interpretation" in the clinical sense, but without benefit of other data about their subjects; they obtained promising results in military psychiatric screening with the 10-choice form. A revision of the "amplified" form by one of the authors [52] is pointed in the same direction, the innovations being aimed at widening the interpretational "horizon" by reducing and minimizing the psychometrically oriented features of the original instrument.*

Harrower's scoring dichotomy—"poor" (abnormal) versus "good" (normal) choices in the multiple-choice instruments [38]—lent itself to swift, easy scoring, even by untrained technicians and clerks. Much of the failure with these forms was due to this relatively non-dynamic proposal. Due, Wright, and Wright's [28] more penetrating approach has not been duplicated in any published reports, but it can form the groundwork for repairing the damaged views of the whole multiple-choice development established by the mechanistic research designs patterned on the dichotomous scoring system [10, 17, 41, 47, 61, 62, 68, 103, 111].

* From a number of preliminary investigations, the psychodiagnostic sharpness of the revision appears to be limited. A further revision, the A-R (accept-reject) Rorschach Method [54], has produced much more promising results. Its form and procedural characteristics can be described as a modified forced-choice technique which provides for "full-scale" scoring and interpretation. Its creation was influenced by the Ranking Rorschach of Eysenck [29] in his modification of the 10-choice multiple choice type. Singer's multiple-choice proposal (3 varieties of test patterns) employed another forced-choice device, but with a more psychometric orientation [98]. He follows Harrower's lead to provide a trichotomy of scoring categories (normal-neurotic-psychotic).

However, many studies, and with all forms of the multiple-choice Rorschach, have demonstrated the possibility of successful application in employment settings. Among them are the efforts of the following: Blair, with teachers [17]; Cox, sales clerks [23]; Kellman, motor coach operators [52]; Steiner [100], a variety of occupations.

Other Recent Forms and Techniques

In addition to the development of two alternate ink blot series [39, 55*], the major uses of which have been in large-scale experimentation, variants of existing group and multiple-choice techniques have also appeared [52, 54, 96, 98]. Sells and his associates report increased potency of their new instrument with the introduction into analyses of other than Rorschach criteria in the screening of aviation personnel [96], in keeping with the increasingly prevalent trend toward well-rounded explorations of *personality* in the experimental population rather than investigation of an *instrument*.

Critique of Theory and Practice in Current Vocational Applications of the Several Rorschach Techniques

Although an orientation to the Rorschach as a psychodiagnostic tool in psychopathology is unavoidable in vocational settings (the need, for example, to screen out psychiatric casualties in selected work situations), the techniques discussed, in the long-range view, are to be adapted for application to "normal" persons in work, training, and guidance settings. Beck's stress is noteworthy: "In the 'normal' endeavors of life, (the Rorschach) explains the individual's character course. It clarifies the logic of the finer traits, and of deeper motives." [12, page 1] But we cannot fully apprehend a particular life course, whether in a total adjustment, or in a special milieu, without conceiving of "the human personality (as) a single functioning unit. . . . Any action of any human can be understood as activity

* That is, exclusive of the BERO series [14, 114] and of Howard's development [45].

of the unit whole, of a living organism, a purpose-moved being. . . . Human actions cannot be fully explained except as actions of the personality as a unit seeking to preserve itself and its comfort." [12, page 1] And in the "normal" strivings within the maelstrom of his economic environment, he cannot be understood segmentally, abstractly, or partially—that is, as an employee who bears certain traits or tendencies not related to the rest of his unitary self.

Translation of such complex theoretical formulations into experimental and practical undertakings is an ongoing challenge, an exhilarating and exciting task for many investigators. Whether well or poorly accomplished, beginnings have been made that promise important future progress. Although it is not our intention to explore all the methodological and theoretical implications of the challenge at this point, we should like to set down some principles that provide a basis for evaluation of work already done, and that may establish goals for both experimental and applied work.

A full formulation of this type has not been made in the literature of our special field. However, many part-formulations appear in nearly every mature publication. For example: Piotrowski's stress on the concept of the total personality in vocational selection [77]; Steiner's "motivational and social determinants" [100, 101]; Hertz's insistence that Rorschach "interpretation depends on what we know about the individual" [41]; Roe's clear insight into the effect of "social interaction of vocational groups," and the impact of cultural stereotypy upon our evaluation of several professional classes [82, 87]; Williams' stress on the uniqueness of the job experience [109].

Thus, projective techniques, and the Rorschach in particular, are moving their users away from trait-dominated approaches ("untainted, clearly-identified aptitudes," "pure efficiency studies," and the like) toward a more rounded view of the "working man," who is to be understood only if his *emotional, cultural, and interpersonal climate* is defined and understood.* Such a view is really not different

* The literature is replete with variations of these terms: "wide-range," "well-rounded," "holistic," "configurational," "full-bodied," as versus "segmental," "partial," "cross-sectional," and the like.

from the one to be taken of the emotionally disturbed patient who is to be understood "clinically." The latter term is now becoming the most frequently used, adjectivally and adverbially, in descriptions of the approaches to be used in vocational applications.* Thus the clinical orientation is really the "vocational" approach applied in a special case and setting. This has been variously termed the "configurational approach" [41], the "clinico-deductive," and the "qualitative" (as contrasted with solely "quantitative" or psychometriclike analyses); but in all such variants of basic "clinical" nomenclature, the heart of the philosophico-procedural orientation has been similar or identical.

Klopfer's "levels of interpretation" [60, pages 195-199] in a clinical setting is an extremely useful formulation in translating the raw data from a projective test into a "full bodied" picture of our "normal" vocational man in his emotional-cultural-interpersonal setting. The "total-action" analysis cannot be made without "a complete integration of all available information" about the subject into the evaluation of the Rorschach protocol. Then, and then only, can we attempt an exploration by "level": quantitative factors first, followed by structural-configurational (intra-protocol) considerations, and capped by a clinical psychodiagnosis—"a complete individual personality picture, using *all* pieces of objective evidence as one would the pieces of a jigsaw puzzle." [60, page 18. *Italics added.*]

In a vocational setting such an approach would utilize the Rorschach preferably as one of a battery of projective, and specific other non-projective, tests (the latter dictated by the needs of the vocational process). But additional "objective" data are required if we are to obtain a clinical picture of the employee in his special "work climate":

1. A personal history, at least as it reflects the educational-vocational background for the particular work he is to do. De-

* That we are not out of the woods yet (at least semantically) is exemplified by the section heading of Abt-Bellak [2] "Projective Tests in Nonclinical Areas," which section contains one of the better pieces on "the clinical point of view" in business and industry (Brower-Weider)!

rived from application blanks, interviews, reference checking, special investigations.

2. Health data, including emotional and genetic aspects: interview, application blank, and, later, physician's report.
3. The socio-economic-cultural adaptation: application blank, interview, interest and personality inventories, certain other less structured projective instruments of the paper-and-pencil variety.
4. General intellectual and educational adaptations as seen through standardized intelligence and achievement-type tests.
5. If applicable, an assessment of specific skills, attainments, "aptitudes," and interests.
6. A thorough definition of the job or work to be done, the changing factors within the work situation, the conditions of work, opportunities for advancement, and the like. This is usually available in the "job survey" or "classification study." *
7. The more unique, but subtler, requirements of the job must be defined [see, for example, 109]: the stresses and strains peculiar to the job; the personality variations in the worker most likely to promote success in meeting such stresses and strains; † the satisfactions the job offers to the worker; and the kind of satisfactions the worker anticipates the job will provide (whether realistic or not). Unfortunately, such data are not always available even after a thorough "job survey," a device too infrequently seen in personnel practice.
8. The general cultural, philosophical, political, social, economic, and other orientations and biases of the immediate supervisor

* For modern practices as regards "job surveys" and "classification studies" (as used generally in private and public employment settings, respectively), consult such standard works as those of Bellows [15], Mosher, *et al* [73], Otis [75], and Waite [107]. All the works cited also treat of the "job specification" at length, but usually cover only in tangential fashion the questions in regard to personality dynamics stressed by us.

† Fruitful evaluations of the over-all adjustment factors are suggested in Freudian literature: See in particular the theoretical proposals of Hendrick [40]. The whole subject of the application of personality theory to clinical work in personnel processes, particularly to the appraisal or assessment of the individual employee, is beyond the scope of this paper. For a general formulation of the problem, see Hertz's bibliography in [41], Chapters 15, 16 in [59].

or superiors, as they will affect the vocational adjustment of the employee.

One example must suffice of the kind of bias that must be taken into account in determining whether a given employee will "make the grade" in a given work situation: namely, the widely held cultural stereotype of "aggressive maleness" as a positive value or ideal [see, for example, Roe, 87]. Obviously, a passive-submissive adaptation on the part of a given male applicant would militate against him in a setting where such an ideal was dominant. (See below, pages 570-572, for case material dealing with such a situation.)

9. Similar considerations would hold for his adjustment to his peers among staff members with whom he has daily or intimate contact, or whom he will supervise.
10. An evaluation of the personal and professional biases and the level of training of the interviewers, examiners, psychologists, and others who assemble and interpret the test and other data.
11. An objective evaluation of job performance: service and performance ratings, anecdotal and other records, efficiency studies, and the like—through reference materials, if a new applicant; through intra-organization files in cases of promotion, transfer, and the like.
12. If "occupational personality patterns" have been validly established for the occupational grouping in which the subject falls, a determination of how, and why, he does or does not fit into such categorizations.
13. Other, less frequently applied, factors seen only in special vocational processes: placement, promotion, transfer, training and re-training, and the like.

Obviously not all thirteen groups of data, or even parts of them, will be available in every case when selection, placement, promotion, or training procedures are set in motion. But these categories must stand as the source of the major content on the socio-economic side of the clinical approach in a vocational setting. Whether the issue at hand is the evaluation of the future adjustment of a single employee,

or whether an experimental design is to be created for the investigation of the predictive power of a projective instrument—determinations should be made within this complex of cultural-social-psychological factors, which we term the "clinical" approach to the vocational scene.

The Rorschach, by itself, or in a battery with other depth-sounding instruments, can be utilized as the summarizing "glue," so to speak, to fasten down the various parts of the jig-saw puzzle (using Klopfer's figure). "Then there is no magic in the Rorschach!" said an industrialist to one of the writers, when the crux of the above formulation was given him. This was an expression not so much of disappointment, but represented (as continued exploration verified) a good insight into the complexity of the problem of selecting or placing semi-professional and professional personnel in his organization. Although not trained scientifically, this particular administrator (and many others, in the authors' experience) was ready to accept the clinico-deductive * approach to the problem. Despite the costliness of some of the clinical approaches, the lack of adequately trained projectivists, and other thorny barriers in the way of their use on a wider scale, business and industrial managers are beginning to realize the usefulness of depth-sounding instruments. (More superficially, they are pleased with the less threatening aspects of the administration of the Rorschach, as compared to the usual pencil and paper "exams" and the anxieties they arouse in both new applicants and older employees.)

As a matter of fact, employers tend to view the clinico-deductive approach as a "common-sense" elaboration and extension of the interview and general employment investigation. It is particularly useful to them if "the interpretation (of the results is given) in terms of every-day concepts and meaningful work situations." [27, page 351] Rieger re-emphasizes this view from her own experience: "Recommendations for hiring and firing must be based not on a general

* The term was coined to cover the introduction of "clinical" evidence into the general methodology of Hull's "hypothetico-deductive" concept [46, 69] as exemplified in the formulations of Klopfer and Ainsworth [59, Chapter 14]. For fuller discussions of the implications of these, and related conceptions, see also Brower [19], Brown [22], Creegan [24], Eysenck [29], Hertz [41], Klopfer [58], Marx [69, *passim*], and Sarason [95].

(test or psychometric) pattern for an occupation, but on the specific requirements of the job and its place within a functioning organization." [81, page 577] The Rorschach technique, through its psychodiagnostic focussing of the various "clinical" elements in the particular picture, provides personality information which will reflect the employee's general ability to fit into such specific requirements, his relationship to the exact social structure and dynamics within the work milieu, and may even throw light on how or why he does or does not conform to whatever occupational patterns (or portions of them) are validly established.*

A Critical Review

The assessment of clinical psychologists, as reported by Kelly and Fiske [57], has been selected for criticism in the light of the principles stated above. The purpose of the research was wider than the validation of the Rorschach, but offered an excellent opportunity for validation.

. . . the experimental study of the validity of all potentially predictive devices including not only conventionally used objective tests but also clinical judgments based on a wide variety of materials such as projective test protocols, interviews, psychodrama and other situation tests and the development of criterion techniques and the accrual of meaningful measures, not only of success in completing training but also of the actual performance of professional duties. [57, page 1]

The major effort was the assessment of 137 beginning trainees from 30 universities during the second year of the research (1947). All of the trainees had been accepted by their respective universities. The battery of tests administered included objective tests of intelligence, achievement, interests, and personality, four projective tech-

* See the outstanding work of Roe [82-88] for "occupational personality" delineations of professional personnel (artists, biologists, physical scientists, social scientists). Less definitive delineations by Steiner [100] are available of engineers, clerical personnel, advertising copywriters, and commercial artists. "Best vs. poorest" characteristics of sales personnel, in a specific setting perhaps not applicable elsewhere, can be found in Cox's multiple-choice Rorschach study [23]. Few studies outside of these have even attempted a formulation of the "occupational personality" characteristics and dynamics of the vocation or profession investigated.

niques (Rorschach, TAT, Bender Gestalt, and Sentence Completion), psychodrama and other situation tests. The battery of tests was supplemented by the credential file, interviews, and autobiographical materials. In addition to case reports, descriptive, evaluative, and predictive judgments were made on three predetermined, fairly schematized, eight-point rating scales by the staff of the project.

Let us consider first some of the criticisms made by the authors of the research itself. There is frank admission in the report of the "inadequacies of current criterion measures of professional success" due in part at least to differing standards of ability and achievement in the various training institutions and in the demands made by the various V.A. installations. Some attempt was made to develop criterion measures (for example, in psychotherapy) independent of the subjective judgments of university and installation supervisors and colleagues, but there was necessarily much dependence upon ratings. Special rating scales were devised for this purpose, so constructed as to make possible comparisons with assessment ratings. Ainsworth points out:

One major difficulty [in prediction studies] is in ascertaining the *exact conditions towards which the prediction is made*, and in knowing in advance the precise demands these conditions would make on individuals of varying personalities. The failure to have made this extension of understanding would seem to have been a prominent factor in the failure of a recent large-scale attempt reported by Kelly and Fiske. . . . [Volume I, pages 488-489, Italics added.]

This problem is accentuated when prediction is attempted for 30 different geographical areas each with a differing set of conditions. The problem would be even greater if the predictions were not limited to V.A. installations where the patient population is limited to adults and largely male. Much more precision in ascertaining exact conditions toward which predictions were to be made would be necessary were the patient population to be extended to include children, individuals retarded in intellectual development, delinquents and adult criminals, epileptics, alcoholics, and so forth.

The Kelly and Fiske study found differences in the amount of

psychotherapy done in different installations. These differences will be found to exist in clinics and hospitals in general along with differences in underlying policies, orientation, and the like. Precise knowledge of these varying conditions is necessary for accurate prediction. The authors doubt whether an over-all prediction of success in clinical psychology irrespective of specific placement can ever be made.

There is also recognition in the Kelly and Fiske study of the possibility of the trainees having come to the assessment with many different sets and involvements. As Sarason [95] points out, account must be taken of the various determinants in a test situation as well as the test results in order to predict from a test to performance in another situation. It was sufficiently obvious to the 1947 assessment staff * to have been commented upon in general conversation that there was much anxiety among the trainees as to the effect of the assessment upon their training, this in spite of the fact that serious attempts were made to assure them that the assessment was for research purposes only and the results would not be made available to the universities concerned.

There was recognition in the study of the possible effect upon accuracy of intervening life experiences during the three-year interval between the assessment and the application of the criterion measures. Approximately one-third of the trainees had received personal therapy during this three-year period, and this was recognized as a source of error in prediction.

Unfortunately, the design of the research is such that it offers no measure of the predictive value of the tools themselves separate from the psychologists using the tools and the translation of their evaluation and prediction into the items of the three rating scales. Thus, in the case of the Rorschach, this very extensive and expensive research makes no contribution to research on the validity of the various Rorschach hypotheses. In one of the dissertations based on the assessment data, Morris † adjudged some Rorschach examiners as good raters while others were regarded as poor ones, the differ-

* The senior author was a member of the 1947 assessment staff.

† Morris [72] pp. 101-102.

ence "seeming to lie in their backgrounds of professional training, experience and interests." He further comments on the "relative inability of three of the (six) judges to make statistically significant personality ratings from Rorschach data, the limited range of ratings made, different conceptions of the manner in which ratings should be distributed and the effect of inexperience with the rating scale upon the ratings made by the Rorschach examiners." [72] One wonders whether the administration, scoring and interpretation of the Rorschach itself, outside of judgments on the rating scales, was adequate in the case of all six judges. As the experiment was set up, time pressures were particularly severe upon the psychologists working with the projective techniques.*

Rae Carlson's index [57, page 192] from the Rorschach as a prediction of dichotomous pass-fail criteria was used to categorize trainees into promising and non-promising groups. To be classified as promising, a specific Rorschach had to meet the following criteria, using Klopfer's scoring system:

1. M greater than or equal to $C \dagger$
2. $(M + FC)$ greater than or equal to $\frac{1}{2} F$
3. FC greater than or equal to $(CF + C)$
4. $F\%$ less than 50%
5. At least one FC and one Fc response.

Approximately 40 per cent of the trainees were categorized as promising by this index. The index did not correlate significantly with the over-all Pass-Fail criterion but did show a significant relationship for criterion groups \dagger categorized as to High or Low Professional Promise. The partial success of this relationship suggests possibilities for the use of hypotheses dealing with proportions relating to

* Within a time interval of not more than 50 hours (24 hour days!) each of the six psychologists had to administer an average of four Rorschachs; score, interpret and write case reports on an average of 12 projective techniques (Rorschach, TAT, Sentence Completion); integrate in a case report the four projective techniques (Bender-Gestalt as well as the three listed above) for an average of two cases; and fill out the B and C rating scales 15 times. This was a severe strain even upon psychologists adequately trained and experienced in all four projective techniques.

\dagger Does Dr. Carlson mean sum color?

\dagger III of Table V-5

inner resources, organization of affectional need, emotional reactivity to the environment, and intellectual manner of approach and other intellectual aspects [see 59, pages 287–315], provided these proportions are modified by a check of such things as quality of response, readiness, absence of *CF*, dysphoric content, and so on, as suggested in the above reference. The selection of hypotheses pertinent to the research should be done by psychologists thoroughly trained and experienced in the Rorschach technique who are capable of translating the rating scale into the proportions suggested by these hypotheses.

It is unfortunate that no job analysis of the work of the clinical psychologist was undertaken in the research. While one must agree that clinical psychology is young (although over a half a century in age!) and changing rapidly, this does not offset the value of such a study, particularly in the area of personality structure. Without such anchorage, one is likely to set up a criterion of an ideally adjusted individual pattern, whereas vocational success depends upon personality "liabilities" as well as assets, needs of the individual which may be legitimately satisfied by that particular vocation without interfering with success in the vocation. From their experience, the authors of this chapter are convinced that many individuals are strongly motivated to choose clinical psychology because of their own personal problems. One then has to decide whether the personal problems of that individual will interfere with his vocational success or he has sufficient control over his problems to insure their not interfering with his relationships to clients. To illustrate: one student was dropped from the clinical program at a mid-western university and advised to seek therapy because it was felt that his personal problems were of such a nature that they would interfere with his professional success. He would be permitted to continue the program were the therapy successful. The therapy was successful but he no longer wanted to be a clinical psychologist! Granted that life experiences during the interval may have influenced his decision, is it not likely that his personal problems were a contributing factor in motivating him to choose clinical psychology as a career in the first place? In an exploratory study done by one of the authors Ror-

schachs were administered to an outstandingly good teacher and an equally outstanding elementary school principal, with the naive expectation of finding well adjusted individuals. On the contrary, the Rorschachs revealed in both cases very severe personal problems, which obviously interfered little or not at all with their professional success. This suggests that their respective job placements helped in the solution of their personal problems without interfering with their professional success.

Kelly and Fiske state:

. . . it is commonly assumed that the value of Rorschach interpretations depends on the clinical interpretations of the pattern of the scored determinants. However, for this prediction problem, we find that $M\%$ scores show significant correlations with most of our criterion measures whereas none of the ratings made by the clinicians on the basis of the total Rorschach pattern achieve statistical significance. [57, page 200]

That may have been true of this particular sample of trainees, all of whom had been accepted for graduate training by their respective universities. Application of this criterion to individual cases would be very dangerous since it neglects the quality of the M response, whether the content is euphoric or dysphoric, readiness of the M response, and whether the content of the M is H or Hd , (H) or (A). To check this, the authors selected two of the most unsuccessful selections at one university out of a total of 61 cases on file. One of the two was dropped from the program, and one we regretted having accepted in the beginning since the grades he received in courses did not give us sufficient grounds for dismissing him from the program. In both cases, the $M\%$ was high: 21% and 18%. While the quality of the M 's was high in both cases, the M 's were 80% (H) and (A) in one case, 36% in the other combined with M in small areas in three more responses, raising the total of "suspicious" M to 64% in the second case. If the content of "feeling of evil," "sinister," "threatening male figure," and "military figure," and sexual confusion is added in addition to the suspicious M 's indicated by the scoring alone, the M 's are still more unfavorable.

The Kelly and Fiske report should not be considered final so far

as the use of the Rorschach in selection and prediction is concerned; rather it should be regarded as a beginning, indicating the direction further research should take. This direction would include emphasis upon the Rorschach as a tool rather than upon the clinician using the tool. The various hypotheses in varying combinations should be tested as to their usefulness in prediction. An exploratory study of successful clinical psychologists should be a part of the research design. The research should include study of the exact conditions toward which prediction is made together with the precise demands these conditions will make.

Final evidence of the value of the Rorschach must await further personality research as pointed out by Ainsworth [Volume I, pages 489-490]. The projective techniques, including the Rorschach, reveal behavior on three different levels as suggested by Rosenzweig [90], and particularly on the third level of "implicit behavior." Fundamental personality research is necessary to predict from these three levels.

One trainee in the assessment program of 1947 revealed hostility on his Rorschach protocol which was not confirmed by the interviews, objective tests, or the situation analyses until the very last situation, which was the last test administered. This raises a fundamental question as to whether this hostility will express itself in his behavior in a way that will interfere with his professional success. Will there be acts of overt aggression perhaps not even recognized by him? Will he feel hostile without expressing it? Or will his hostility find indirect outlets of expression? Will his hostility show up in the training period or only later in his professional life? These questions can only be answered by basic personality research.

But, until these and other areas are thoroughly "saturated" by frontal and diversionary research attacks during the coming decades, the demands of the industrialist, personnel technician, and vocational psychologist for *immediate* programmatic suggestions must be met. It is our contention that the clinico-deductive method, as outlined above and illustrated below, can meet these needs by supplying a valid picture of the "vocational man" in specified emotional-cultural-interpersonal settings.

Implications for the Vocational Field of the Use of Clinico-Deductive Methods

Numerous examples can be given of this approach in the general vocational field. A few representative ones from the authors' experience should suffice for the purposes of this review.

The Dxy Co. creates a roster of junior clerks from which it picks new employees as needed. The roster is created from applicants who are given a test battery (including pencil-and-paper intelligence and achievement tests, plus the Group Rorschach). Those that qualify on the structured test criteria are interviewed, their references are screened, and a cursory health examination is administered. The Rorschach results are scanned prior to the interview for psychiatric screening purposes, pointing out those individuals who are patently disturbed. The findings provide guide points for a more elaborate "look-see" during the interview (usually at the hands of the more skilled or clinically trained examiner). Non-Rorschach evidence of such disturbance must be abundantly present to keep the applicant from the roster, if all other factors would place him on it. When the roster is completed, placements are made within the organization according to the personality patternings revealed by the Rorschach data and the other psycho-social information about the individual employee, as these can best be matched with the job needs, the kind of supervision given to and by the employee, the type of staff he is to work with, and other factors. Thus, for example, an obviously outgoing, demonstratively friendly, self-sufficient junior clerk will be placed in an opening at the reception desk; while the seclusive, intratensive, methodical, passive-submissive clerk might be placed in a file room where he has little or no contact with the public or other employees. Additional physical and other examinations may be administered at this point, if job requirements are such that a need for more minute information and analysis is indicated. In such a system, placements have tended to create greater job satisfaction among the individual employees and to improve over-all efficiency of the depart-

ments affected. Similar, or analogous, systems are devised for upgrading and promotional programs, for transfer of individuals and groups of employees, in guidance and counseling by personnel technicians and psychologists.

Another firm, the Ewq Co., Inc., hires all upper-echelon staff (approximately at "junior executive" level and above) in the following manner: Through advertising in the newspapers, plus announcements among its own staffs, a number of applicants are screened by personnel technicians (not including the psychologist). Certain general qualifications (experience, education, technical) must be met by all applicants. Those that successfully reach this point are interviewed, their references are checked, their health is examined. All that are held to be eligible now are given either the individual or group Rorschach (depending on the number of applicants and pressure of work). The psychologist-projectivist is asked to write a personality summary to fit the "personal characteristics" section of the job specification. The latter is highly detailed as to most of the 13 "work climate" factors (listed on pages 557-559). The report is written with a view toward selecting candidates that best fulfill the personality requirements of the position, and who will also work best in the given openings for that position. The psychologist, personnel technician, and assistant department manager (with whom the candidate will work) confer about the results. Information is introduced about the candidate which either corroborates or amends the psychodiagnostic formulation. The clinical results, in turn, help the others to understand parts of the data that cannot be clearly conceptualized without the psychologist's contribution. The method has been in use for nearly a decade in Ewq Co.* and, with very few exceptions, has resulted in happy choices both for the company and the individual employees involved. Balinsky [9], using Piotrowski's educational and vocational guidance formulas [76], reports a use of the Rorschach similar to the one just described.

Probably the largest number of single applications of this general

* For obvious reasons, neither the nature of the firm's business, nor types of positions, can be described here. However, publication in the literature of a summary of the decade's experience is contemplated.

approach will be found in guidance and counseling settings, whether such service is rendered as part of a larger vocational process, or is a special function of an agency or clinic. Balinsky's two cases [9] could readily be placed in this category, if the report had been utilized with the subjects for guidance, rather than with their employers for selection and placement purposes.* Although his number of cases was also small, Taylor [106] found that the Rorschach, employed in a clinico-deductive fashion, produced important results in a vocational guidance agency program. In contrast to Kaback's partial and mechanistic study [48, 49], which produced negative results for guidance purposes, Weider [108] employed a full-range approach suitable for mental health programming in an industrial setting. He evolved active guidance techniques, through intense contact with supervisors and other methods, so that employees with "mental and emotional disabilities, formerly considered unemployable, can be fitted into the industrial program." [108, page 310] Here the whole individual is taken into dynamic account, and, perforce, depth-sounding instruments for personality diagnosis were used (Rorschach, TAT, and others) as an integral part of Weider's program.

We choose one example from our experience to illustrate a well-rounded use of personality data in a vocational guidance background. Mr. Zdz † had progressed, within 10 arduous years, from salesman to sales manager and finally to director of sales training in the midwest office of a well-known national concern. He was happy in the latter position, doing a highly acceptable job, earning a good salary, and enjoying his role in his own family and community. Suddenly he was offered, because of his excellent work record, the sales managership of the entire west coast division (five states) of the same company. He became panicky with fear of failure if he accepted, yet he was certain that if he turned down this flattering promotion he would be "looked upon as queer" by the national office. This might in fact spell the end of his career—or, at the least, put a blight on it

* This points to the generic nature of the clinico-deductive approach, so that only the answer to the question *To whom is the report given?* determines how the application is categorized.

† The data here are disguised to preserve the anonymity of the subject and the firm.

from which recovery would be most difficult. He came for guidance and counseling with this dilemma uppermost in his mind. After the initial exploratory interviews, a thorough biographical inventory was obtained, an analysis was made of the firm's national and local "climate," and a battery of projective tests was administered. It soon became abundantly clear that Mr. Zdz was "working against (his) own personal current" in the tense, competitive field of sales management: he displayed strong passive-submissive strivings (of which he was only partially conscious) which were unfulfilled in both his family-social and vocational life. His personality showed remarkable flexibility and resilience up to the time of the study, in that he was able to maintain the tension-lull compromises between these strivings and the demands made on him to be extremely active in his work (if he were to maintain the current level of success, even without taking the new offer). We found that conscious motivation had "driven" him into highly remunerative sales work "to earn more money to keep up with the Jones's his wife was cultivating." Before starting his career as a salesman, he had been a music teacher. Prior to his decision to leave music teaching, which he "loved dearly" (he is still a devoted concert goer), he had never "dreamed" he would make a salesman. But his intense and devoted concentration to making "enough" money—"and believe me it took all my heart"—could not wipe out the longing to return to the "peace and joy" of his first professional choice. Some of these values were recaptured when he was made sales training director. As a matter of fact, it was the latter position he daydreamed of maintaining the rest of his life, primarily because of the teaching opportunities in it. This was the optimal "passive" compromise within the "highly active" work setting he was able to create. Thus, the shock of the offer to take over the "hectic" sales activities of a huge territory was nearly unbearable. Formerly stabilized compromises with the passive components in his personality would be completely overthrown, and the conflict revived which he had so long worked to lay low.

An exploration of the firm's "work milieu" and opportunities, the personalities of the national superiors with whose aid he would have to adjust this conflict, and other germane factors, revealed that it

would be politic and practical to approach the firm for placement in a less competitive position, but in the upper levels of the organization. With this guidance he was able to obtain placement as director of marketing research, suffering no loss in prestige or salary. After a three-month period of readjustment he "found himself again": he has only a small staff to supervise (one of the fears related to the west coast assignment was the supervision of "a huge organization"); he has an abundance of "pedagogical" duties (mainly in explicating market trends and more "abstruse" factors to his peers and superiors); and there is a reduction of the need to compromise with his passive strivings. No attempt was made to "change" his personality, or even refer him for psychotherapy, as his general adjustment was clearly within the normal-neurotic range. However, guiding him during the realignment of external forces, so that he and they were both in better "tune" with his major personality trends, was effective in producing a more efficient and richer life and vocational adaptation.

Implications for Research of the Clinico-Deductive Approach in Vocational Processes

This brief summary necessarily leaves out the details of interviewing, testing, and exploration of the work milieus;* but it exemplifies the type of holistic approach that takes into account the personal-social-vocational climate in assessing a practical situation. Such an approach to research investigations poses a host of theoretical and procedural problems, which this chapter is not designed to explore. However, we should like to stress certain goal-seeking principles which we feel projective research must actively take to heart if we are not to fall into the methodological traps described earlier. Although these principles are oriented for the special field of applica-

* It is unfortunate, in the history of the applied field, that busy projectivists cannot publish full clinical material, in the tradition of medical publication, so that the trends so briefly described here could be more fully apprehended, reviewed, and criticized.

tion, we must reiterate the high importance of the more general research principles set down by Hertz [41], and others,* as regards formulation of underlying theory, sharpening of reliability-validity research techniques, stimulation of replication work, development of unique designs for clinical validation of the Rorschach, and other lesser considerations.

These, then, are the special research goals in our special field of application, of Rorschach (and other projective) techniques to vocational processes:

1. Research design should be based on a holistic evaluation of the "vocational personality" within his life *and* work setting. Important steps toward this end have been taken, such as understanding "what people are like" who have chosen certain life careers (in the work of Roe [82-88]), in the selection of psychiatric residents at the Menninger Clinic [43, 64], and in much unpublished work. In evaluating the psycho-social adjustment, the impact of unconscious personality dynamisms must be fully elaborated as the best guarantee for the avoidance of "segmental" or trait-dominated analyses.

2. The use of batteries of projective instruments, as a part fulfillment of the first goal and as an interim technique until more inclusive designs are produced, will also minimize some of the trends toward "sign" and other mechanistic methods (particularly in the group forms). Frequently such batteries, if they include biographical and personality inventories of some power, can go a long way toward accomplishing the holistic goals set forth above. On this score see the work of Abt [1], Holtzman [44], Holt *et al* [43, 64], Kates [50].

3. Development of clinical criteria in the validation of the Rorschach in vocational applications must be stimulated. Such criteria, preferably, should be longitudinally oriented (see the discussion of Frank, above). Philosophical and methodological biases of the projectivists, rating judges, employers, and others involved in the research design should be fully elaborated. It is very possible that many of the matching failures in military applications of the Rorschach would

* See, in particular, Cronbach's review of statistical methods in Rorschach research [25].

have turned out to be successes if different biases (among the same or different judges) had formed the criterion bases.*

4. The development of fully descriptive "job specifications" for the vocations and professions under study will offer the best guarantee that employer and other "work climate" biases will be taken into account. Business and industry should be encouraged to develop documents and processes that will permit the fullest production of data for the 13 "work climate" descriptions (pages 557-559). These represent the socio-economic aspect of the necessary "clinical" data in the delineation of the vocational personality; but they would also be the best source of criteria for the validation of testing instruments of all types, including the projective.

5. A corollary to the expanded use of the clinical method in vocational processes is the simultaneous expansion of training and re-training of clinicians for the industrial setting, and of industrial psychologists in the clinical method. The readiness of many sections of American business and industry for the acceptance of clinico-deductive approach should facilitate the implementation of both pre- and post-degree training of this type.

6. Specific configurational determinations for individual vocational entities, such as those for young male mechanical workers [78], hold promise for the isolation of Rorschach factors (in both individual and group forms) that could be of great practical and theoretical importance. Replication and validation studies,† as well as extension of this approach to other positions and vocational categories, should be actively encouraged.

Cox's work with the multiple-choice Rorschach [23] demonstrates the possibility of differential weighting and scoring in this form, which could operate validly for specific vocations.‡ His approach

* A good example of the misapplication of this principle appears in the Kelly-Fiske study [57], discussed above.

† Such as Anderson's [5]. Although tending toward "magical Rorschach" approaches, she emphasizes, however, the caution of "supplementing test results by background and interview data."

‡ Malamud and Malamud [66] displayed analogous results in psychiatric screening projects. See also the following for substantially the same conclusions: Blair-Hoehn [18], Due, Wright & Wright [28], and Lawshe-Forster [62].

was designed not merely to isolate discriminative test items, but to produce (more fundamentally) "personality patterns" operative in the vocation under study so that an evaluation can be made of anxiety tolerance, availability of "personal energy" in the work situation, emotional "warmth-coldness," and the like, when distinguishing between acceptable and unacceptable sales personnel. His pioneering work needs to be expanded into a variety of vocational groupings.

At the same time, research in this area could be designed to explore other unique features that can be found in the various Rorschach techniques at hand, so that we might some day have a group of differentiated instruments available, not according to individual versus group classifications, but as to acuity in their application to specific vocational groupings.

7. For a philosophical and methodological orientation in research in applied as well as experimental areas, we can do no better than to quote Hertz:

(The Rorschach Technique) is an instrument which works under the critical eye of the clinician. I think it is fair to say that the only time it does not work is when it is dissected, distorted, modified, objectified to the point of sterility, and subjected to piece-meal and rigid statistical manipulation. Otherwise it works. The task of the Rorschach worker, for the statistician, indeed for all who are interested in personality theory and projective methods, is to find out why. [41, page 332]

We feel that the application of Rorschach techniques in industrial settings, if controlled by clinical objectivity and/or experimental design (as the practical situation allows), will provide large quantities of new data for analysis of, and increased insight into, the "normal" personality * in its most time- and energy-consuming role. This in itself should be an exciting scientific goal for the projective psychologist. It will go a long way toward answering Hertz's "why"; and it will also produce a body of new theory and techniques that can

* For the increasing "push" toward the depolarization of the abnormal-normal dichotomy in psychopathology, see, for example, J. F. Brown [21, pages 6-12]; for a more general exploration and de-emphasis of the intellectual-nonintellectual dichotomy, see Kellman [51]; and for applications of this trend in industrial settings, see Brower [19] and Weider [108] for a "case study" of an entire industrial establishment.

help attain the general socio-economic goal of helping our working population achieve optimal vocational adjustments. This should, in turn, increase the store of personal well-being and remove some of the negatives standing in the way of richer and more efficient interaction at group and community levels.

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Top Management and the Rorschach Technique

One of the more significant developments in applied psychology in the last decade has been the rapidly increasing utilization of clinical methods and procedures in dealing with the problems of people in organizations in general, and of people who direct and administer the activities of organizations in particular. This specialized field of clinical psychology, now occupying perhaps one hundred psychologists in the United States, has to date received scant mention in the professional literature. The purpose of this chapter is to describe in brief the nature of this work, to point up the applicability of the Rorschach technique to certain of its problems, and to suggest some ways in which such applications might be turned to good account in advancing our understanding of the instrument.

The Clinical-Industrial Psychological Approach

The field of clinical-industrial psychology, as distinguished from conventional industrial psychology and vocational guidance activities, is currently dominated largely by a small number of consulting firms and some university psychologists who do part-time consulting. These consultants differ somewhat with respect to their philosophies,

organization, and procedure, but have a more or less common perception of the locus of optimal impact upon a client organization. To put this another way, they predicate their work upon the proposition that significant and enduring improvements in the human climate of an organization are most likely to come about when the leaders of an organization recognize and understand the need for such changes and enthusiastically participate in the actualization of them. The over-all objective of the clinically oriented consultants would seem to be to facilitate the movement toward maximum self-realization of the individuals with whom therapeutic relationships are established and to seek to maximize their collective strength through the emergent values of productive interpersonal functioning.

Typically, work with an organization is initiated by making a psychological evaluation of the principal head of the business and his top management group. Utilizing a clinical interview and such tests or techniques as may seem appropriate, the psychologist seeks to understand the person himself and his plans and hopes for and problems with the organization. This evaluation is written up and reported back to the man, serving as a take-off point for an ongoing therapeutic relationship. This process is then repeated with the next echelon in the hierarchy, and so on as time and the needs of the organization dictate. No typical pattern seems to exist with respect to the handling of evaluations below the top man—save for the maintenance of confidentiality in regard to matters of fact and feeling revealed by any individual. The pattern with which the author is most familiar requires that before any additional group of people are involved, a frank, thorough, three-way discussion of the work and its objectives be held between top management, the people concerned, and the psychologist. Evaluation and participation are voluntary—although to ignore the real or imagined implicit coercion present in some cases would be folly. Evaluations when written up are reported back first to the person concerned, and (only with his consent) to the head of the business.

As more individuals become involved in the psychological program, a typical next step is to initiate group work. Such groups are

usually task-oriented and composed of individuals in close interaction within the organizational structure. The role of the psychologist in these groups is catalytic and facilitative. Depending upon his therapeutic orientation, he may or may not be helped in this role by a clear understanding of the personal dynamics of the constituents of the group.

In addition to working developmentally with the key persons already in the organization, the psychologist helps the company to think through its personnel needs. Applicants for key positions, after screening for technical competence by the management, are usually referred to the psychologist for evaluation. Knowing the individuals who constitute the in-group, their individual and joint standards and objectives, the psychologist's task with respect to the applicant is to describe him and to appraise the likelihood of his becoming assimilated, finding satisfaction, and making a valuable contribution to the organization.

Although the psychologist may and usually does perform a wide variety of ancillary functions, the core of his work is in the fields of evaluation and of individual and group development. Also, it is within the scope of these activities that the Rorschach has its most promising place.

Some Applications of the Rorschach in the Field

It is probably apparent from the foregoing that many of the factors limiting the use of the individual Rorschach in the industrial field in general, might not be operative in work with key personnel in particular. The limitations on time and expense can be relaxed in view of the tremendously critical role of executive personnel in the earning power of the organization. Where the Rorschach can contribute to the clinician's effectiveness in the situation outlined, its relative costliness as a diagnostic instrument becomes trivial.

Appraisal of the Principal Executive

One of the most intriguing avenues of application is in the appraisal of the principal executive. Here the psychologist deals with individuals who have achieved positions popularly accorded a very high degree of prestige in our culture. One need not ordinarily feel apologetic for being a company president, nor explain the nature of one's work to others—this being quite apart from the fact that the commonplace stereotype of the president's job is far from the mark. The status accorded the president is maximum, the responsibilities of the job are extreme, and the remuneration level is high. The position carries with it a great deal of power over others, both overt and subtle in character. Of considerable psychological significance is the isolation of the individual at the top of such a hierarchical structure.

Typically, these individuals are at least superior in intelligence and of mature years. Since executive work is primarily a matter of dealing with others, and these individuals usually reach their positions by progress through the executive ranks, they are—almost by definition—to some degree effective in dealing with people. However, this says nothing of the character or the quality of their interpersonal relationships, nor of the psychodynamic cost of such effectiveness. They are usually (but not always) individuals of well-integrated façade, good access to the "persona" (in Jung's sense), and durable defense systems. Very seldom are they in need of, or motivated toward, psychotherapy as this is usually assessed. Neither, however, are they particularly defensive at the conscious level with respect to the hypothesis that they could become more effective or in general move toward self-realization more surely. The last statement requires qualification, in that the company leaders described have brought psychological consultants into their organizations; and to this extent they are a non-random sample of the population of company presidents.

Frequently the psychologist is put to it to confute the axiom, "You can't argue with success." How could an individual have worked his way to the top of an organization without possession of a very high

degree of skill in organizational behavior? Actually, what is found in terms of relatively superficial behavior is curiously—though often deceptively—parallel to phenomena at much deeper levels: that behavior which was once adaptive has become maladaptive. The security operations conducive to ascension through lesser offices lose appropriateness at the pinnacle. The behavior ways that have brought the man to this position may obstruct the exercise of his now major function—that of guiding the enterprise as a whole entirely through the work of others, with some of whom he previously may have been in competition.

The nature of the therapeutic objective here is curious: it is neither symptom abatement in any ordinary sense, nor is it fundamental restructuring. It is to promote the most efficient conversion of a segmental complex of maladaptive behaviors into behaviors appropriate to the present situation. Here, precisely, is where the Rorschach can play its unique role; for the integration of such a conversion even into the façade will depend upon the relation of the displaced and substituted behaviors to the total underlying economy of the individual. Indeed, the criterion of "appropriateness" of the new behaviors derives from no a priori standard of how a president should act, but requires a complex of behaviors consonant with his established coping mechanisms (as the behaviors to be replaced may well have been), and capable of meeting the subtle new demands imposed upon him by a changed environment. In general, the therapeutic objective can be met when new behaviors are learned that maximize the resolution of external problems and meet internal needs as well as or better than the old behaviors. For the assessment of all these personality components, the Rorschach technique has proved particularly fruitful.

Studying Interpersonal Relationships among Top Executives

A second area, in which the role of the Rorschach is more conjectural but highly intriguing, involves the interpersonal relationships among the top management group. Here an unusual opportunity is provided for the psychologist to observe frequently and over an extended period the natural organizational functioning of

a group of individuals. ("Natural" in the sense that this is the accustomed life-work situation of the people with respect to location, processes, actions, and the like.) He may observe the individuals working all together in group meetings, working with one or more members of the group, working alone, or with individuals outside the group. Typically, he will have established some individual therapeutic relationship with most of the people in the group early in the course of his observations.

The objective of the psychologist in this context is to do what he can to promote the most effective interaction of these individuals in the furtherance of their collective efforts. Obviously, many factors of a non-psychological nature operate in this situation. Physical and administrative facilities, the organizational structure, volume and character of the demands made upon the organization, prevailing levels of technical proficiency—all these influence the character and quality of the group action. While the psychologist may—and usually does—contribute from his special knowledge to management thinking about these matters, this is not germane to the immediate problem.

The psychologist in this situation has before him the richest sort of firsthand, continuously generating, raw data on the social behavior of the individuals in the group. If he also has available to him the Rorschach records of these individuals, he has the makings of a complex and arduous task, any progress in the accomplishment of which should contribute to his effectiveness in serving the individuals and the group. It is as if for a child watching a large puppet show for the first time the curtains were suddenly stripped away, revealing a space very different from the formal scene of the show and animated by a bewildering array of moving strings and agile fingers. The run of the plot is made no more evident for seeing the fingers and their obscure ties to the mannikins. The task of relating these two classes of data seems roughly analogous to that of seeking the transformation laws between two inertial systems.

The unseasoned Rorschacher is struck by the failure of the people to act the way their Rorschachs say they should. The dominant, assertive, vociferous, smiling sales manager has an $F\alpha_1$ over 70, and

no color responses. It takes some watching to see that, while he is careful all should call him by his nickname, no one is much closer to him than this and that his smile becomes quite predictable. The research director and uncontested creative genius of the company gives a record with no *M*'s. The comptroller, whose infallible eye for the budgetary overage and smooth handling of much detail compel the grudging respect of all, gives only *W* and *D* location responses; and so on through the group. There could hardly be a clearer demonstration of Klopfer's formulation that the Rorschach predicts relevant classes of behaviors—relevant to the ego structure modulating them, and in no way necessarily homogeneous at the descriptive level. (See also Chapter 10.)

Hypothetically and ideally, if the relationships can be established between the observed behavior of each individual and his underlying need structure, and if the domain of behaviors equally satisfying such need structures can be elucidated, and if a domain of behaviors generally conducive to the achievement of the group goals can be specified, then there can be a combination of realizable individual behaviors such as to maximize both individual need-satisfaction and collective achievement. On the one hand, this proposition is fairly obvious; on the other hand, its actualization involves a mighty calculus for which no adequate formal models are available. None the less, this is precisely the formal problem faced by the clinician using Rorschach data in this context.

Planning the Use of the Psychologist's Time

A third area of application for the Rorschach involves the decision as to where the psychologist may focus his efforts most usefully. Usually more people in the group will seek his help than budgetary limitations permit him to serve adequately. In part his decision may be influenced by a management preference based on the relative importance of individuals to the organization, or upon the effect of their behavior on others. In part it also depends upon the clinical judgment of relative therapy risk. A request for the psychologist's time may have many meanings. It can be based on the assumption that "using the psychologist" will bring top management favor. At

the other extreme it may reflect essential motivation toward therapy. In contributing to the differentiation of these motivations, the Rorschach can increase the efficiency with which the psychologist's total time with the client is used.

Evaluating Applicants for Executive Posts

The fourth area is in the evaluation of applicants for top level posts. The general case of the application of the Rorschach in selection work in business and industry has been treated systematically in the preceding chapter. In the process of selecting top level executives, certain considerations present in other types of selection become magnified and some additional factors peculiar to this sort of selection arise. Although the reasons why a newly hired executive may not "pan out" are numerous, technical deficiency is seldom among them. In like manner, intelligence and specific aptitudes are somewhat the less critical to the selection process—not because of irrelevance, but because of the screening inherent in having held the kind of jobs prerequisite to consideration for a top management position. This narrowing of the range of choice along these and other dimensions focuses the selection effort necessarily on the personality structure of the applicants.

Upper level executive positions are relatively unique in industry in the demands they make upon the whole person—in time, ego-involvement, energy, and sacrifice of other interests. In this setting it is difficult to separate one's work life from the rest of one's life. Contrary to popular suspicion, and despite the comparative absence of financial obstacles, it is relatively difficult to find non-working compensations for dissatisfactions or frustrations experienced in work at this level. It follows that effectiveness in such work depends to a very high degree on meeting internal needs through the work itself.

There are few positions for which it is more difficult to establish meaningful specifications. There is no population of General Managers of the X Company from which to derive criteria for selection purposes. There may not even be the trivial case of a population of one. Where specifications are prepared, they are likely to give as

much information about the preparer as they do about the ultimate successful applicant; and it is upon this point that one of the major values of the Rorschach for this work turns.

The newly hired executive will succeed to the extent that he meets the real needs of the organization. Many of those needs will be instrumental, involving demands upon his technical and general executive skill. No less important are the needs and expectations of a limited group around him—his superiors, collaterals, and immediate subordinates. Again, many of these human needs are general, to be met in similar positions in similar organizations. We are made well aware of this general area of concern by much current attention to "human relations." All of the foregoing might reasonably appear in a thoughtfully written job specification. What will not appear there are the essential internal needs of the applicant's potential intimates, needs that may well be crucial to his success.

The point here is that the antecedent knowledge by the psychologist of the essential personality structures of the key figures in the new man's work-to-be is very often the hidden specification for the job. Unless and until this is known, exhaustive understanding of the applicant is of limited use.

In addition to its basic contribution to the definition of the real job and its virtues in the subsequent selection process, the Rorschach has some special merits in relation to this particular applicant population. As a whole, such applicants have had much experience in conveying what they want to convey in face-to-face conversation. They have stabilized and workable defenses for such situations. Often the total hiring situation is on both sides exploratory, so that the psychological evaluation is less likely to appear as a hurdle than it may to applicants for lower level jobs. The impact of this is to give the applicant much better control of the interview than is typical, and to make it proportionately more difficult to make an adequate appraisal of him by such means. The value of the Rorschach in penetrating such defenses is obvious.

Some Further Avenues of Inquiry

One of the most accessible fruits of the continued use of the Rorschach in varied industrial settings is a test of the hypothesis that there is an "executive personality" in the sense of some statistically significant configurational invariance in the Rorschach records of the executives sampled. Such a study is in process by the author and a colleague, based upon a fairly large number of records obtained from executives and executive applicants in a variety of Southern California industries. One highly tentative finding would seem to be the existence in these records of considerably greater *W* and *F* percentages than is characteristic of the general population. These records have always been accompanied by a reasonably thorough interview on personal background, and usually by additional projective and psychometric tests. In addition, for many cases detailed performance data, both objective and subjective, are available. The data are sufficient for a holistic study of the personalities encountered. In view of the special role of the business executive in our current culture, such a study might have considerable value both from an applied vocational and a sociological standpoint.

Another research possibility depends upon the condition that the client-psychologist relationships earlier described may continue over many years of close association. It would seem rather uncommon for a psychologist to maintain contacts with normal, productive adults over such durations, and the yield in longitudinal studies could be considerable. Study of the personality at various levels as the individuals grow with and in the organization and under several therapeutic regimens might be expected to add to our understanding of the psychodynamic and environmental concomitants of self-realization.

Certainly the most difficult and potentially the most rewarding line of inquiry relates to the opportunity to study the individuals *per se*, these same individuals in their developing group roles, and the aggregate of them within the framework of a goal-oriented, hierarchical, organizational structure. Such a study carried forward

with data available for various levels of functioning provided by direct and continuous observation of organizational functioning, continued therapeutic contact, and periodic re-evaluation employing the Rorschach and other appropriate techniques, could add a new dimension to what is now known of organizational behavior.

Few students of the industrial enterprise as a psychological phenomenon can ignore the reality of what is often called "company personality." In clinical-industrial work at least implicit cognizance is taken of it in selection work. Undoubtedly, it is related to morale and productivity, and to the over-all effectiveness of the enterprise. Yet what it is, in any essential sense, is little understood. To what extent is it a function of the personality of the company head—or of a succession of heads? Is it stable and relatively enduring, or in constant major flux? If it changes, what are the correlates of such changes? Can it be modified, and if so to what extent, by psychological intervention? Does an organization, unwittingly or not, seek to repeat its pattern in selection, like the gene unerringly stamping its peculiar mold on every building block of its own growth? Is it really an emergent meta-personality, or some mean function of the personalities of the key figures in the organization? If the latter, what relation does it bear to the various levels of their total functioning?

The elucidation of the meta-dynamics of organizational personality, and the formulation of a relational calculus with the individual personalities of its constituents, might have profound implications. Ambitious and distant as such an objective may be, it should be recognized that developing answers based on sound research to any of the questions in the preceding paragraph would have vital applicability.

In sum, clinical psychologists working in industry have found new and fruitful uses for the Rorschach stemming out of the special demands of the field. Conversely, certain aspects of work in the organizational setting give rise to the opportunity to add to our understanding of the instrument. In particular, the possibility for intensive, longitudinal, multi-level studies of normal productive individuals functioning together in a goal-directed hierarchical structure presents a challenging opportunity for much further research.

Part Four

Diagnostic Practice and Projective Theory

- CHAPTER 17 Some Relationships Between the
Rorschach Technique and Other
Psychodiagnostic Tests
- CHAPTER 18 A Re-evaluation of Projective Theory



Some Relationships Between the Rorschach Technique and Other Psychodiagnostic Tests *

Consistently, this chapter on the relationships between the Rorschach technique and other tests will begin with the same general statement with which it will conclude: The exact relationships among psychological tests are almost entirely a matter for future research. If this were completely true there would be little left for this chapter except conjecture; fortunately, even at the present date, there are data that yield useful clues for the clinician to apply. The bulk of this chapter, devoted to these, is divided into three main sections: (1) relevant experimental evidence concerning the relationships among tests; (2) *a priori* statements or theoretical points of view about the relationships among tests; and (3) a clinical example illustrating some of these differences. A fourth section, on the problem of "validating" the differences among tests, completes the chapter.

One way of defining projective tests is in terms of the nature of the stimulus (the test materials), the nature of the *Aufgabe* (the subject's task), and the approach of the interpreter. From such a simplified point of view, projective tests may be defined as those psychological techniques that are characterized by ambiguous stimuli (such as ink blots, pictures of people, incomplete sentences) to

* From the Veterans Administration Center, Los Angeles, California.

which there are no right or wrong answers (inasmuch as the stimuli are ambiguous) and to which any response by the subject is amenable to *interpretation* by the *clinician* trained in that technique.* When the differences among the psychological tests are approached from the point of view of the nature of the stimulus it becomes simply a matter of following convention to state that the Rorschach test contains the most ambiguous or the least structured stimulus material of the techniques routinely used for diagnostic work with adults. Even if this point of view were accepted without demur (and we shall cite below some statements that would seem to take exception), there still remains the important question of what are the correlates of varying degrees of structure in the stimulus materials. In other words, if the Rorschach test is less structured than the MAPS test, or if the MAPS test is less structured than the TAT, what does this mean in terms of what the clinician can say about the subject's character structure, psychological defenses, fantasy content, past history, or future overt behavior from each test? Just as the basic question when one interprets a projective test protocol is, "What kind of person would the subject have to have been in order for him to have responded as he did to these test stimuli?", the sixty-four dollar question in comparing a subject's responses to different tests in a test battery is, "What are the different correlates in personality and behavior that co-vary with the different psychological demands made upon the subject by the different tests?"

As is known to all, the accepted methodology in scientific psychology consists of first presenting clear-cut hypotheses and then investigating to what extent they are supported by experimental results. It would be well if we could follow this sequence in our field, but appraisal of the *status quo* indicates that we have more "hunches" than "facts." For this reason we shall turn first to a presentation of a

* An implication of this point of view is that there are three prerequisites for skill in projective test interpretation. The clinician (1) should have knowledge about the expected and unusual responses that are elicited by every part of the technique (i.e., he should know the "norms" for every card); (2) he should have had clinical experience with a number of patients of a variety of nosological types (i.e., he should know what an hysteric or what a schizophrenic really "looks like"); and (3) he should have a good systematic understanding of a clinically useful theory of personality—in the writer's belief, a modification of the psychoanalytic theory of personality.

selected sample of the relatively few experiments in the area of the relationships between the Rorschach and other tests so that we can see what few "facts" there are. After that, we shall (pages 609–619) quote a number of hypotheses—opinions and points of view—related to this same topic.

Experimental Studies

As stated at the beginning of the chapter, the exact nature of the correlates of various degrees of test structuredness will have to come from experimental work based on clinical observation. Several experimental studies are especially relevant to our topic. From among these, four will be summarized in this section of the chapter. They will be presented in the following order:

First, comparisons between the Rorschach and other tests. These will be taken from two studies: one by Shneidman, Joel, and Little, which presents certain finds from the book *Thematic Test Analysis* [21]; the other by Stone, which presents data from his unpublished dissertation [25].

Second, comparisons among picture-thematic tests that have varying degrees of structuredness in the stimulus materials (essentially, comparing the MAPS-prototype with the TAT-prototype). These will be obtained from an unpublished experiment by Proud [14].

Third, comparisons between the TAT and the MMPI. These comparisons will be cited from the results of factor analytic studies by Little and Shneidman [10, 11].

Thus, in these studies there is a continuum of structuredness implied: from Rorschach to MAPS test to TAT to MMPI. Let us turn now to the experimental data.

The Rorschach versus Other Tests

Although, as indicated by the title, *Thematic Test Analysis* is primarily concerned with the analysis of thematic tests, some data in that book throw light on the relationships of the Rorschach to other tests. The book reports a study in which test protocols for one 25-year-

old single male were sent to expert clinicians for "blind" interpretations. The tests, and the interpreter for each, were as follows: The Rorschach (Bruno Klopfer), the Draw-a-Person (Karen Machover), the Bender Gestalt (Max Hutt), the MMPI (Harry Grayson), the Wechsler-Bellevue scale (Helen Kitzinger), and sixteen interpreters for the TAT and MAPS test.* TAT interpretations, which ranged in length from four typewritten pages to over forty typewritten pages, were reduced to discrete items of personality description. This process yielded 802 distinct items of personality description. From these 802 items, an 18-category outline of "Interpretation Areas" was developed, and each of the items was subsumed under one of the 18 categories. The other test reports (Rorschach, Draw-a-Person, Bender Gestalt, MMPI, and Wechsler-Bellevue) were also transposed into separate personality items; these reports yielded 239 items. Some aspects of the behavioral data—the therapist's résumé of the patient from psychotherapy sessions and the psychiatric follow-up interview—were also coded and yielded 91 and 78 items respectively. The total number of items was 1210. As stated, the 18 categories grew out of the items themselves. No single integrated theory of personality was used, and the set of items was not meant to be uni-dimensional. It was simply descriptive. It was not intended to represent dimensions of personality but rather to enumerate categories under which items of personality description in psychological test reports could be subsumed. (It might be stated that a check on the reliability of the categorizing by two independent judges indicated that the placement of personality items into categories was very stable. See page 297 of *Thematic Test Analysis*.)

The results of the procedure described above are presented in Table 1. The figures in the table refer to percentages; each column totals 100 per cent. The TAT column is the mean per cent of eleven of the sixteen interpretations whose reports yielded twenty or more separate statements of personality description. There is no

* The sixteen TAT and MAPS interpretations were by Magda Arnold, Betty Aron, Leopold Bellak, Beverly Cox, Leonard Eron, Reuben Fine, A. Arthur Hartman, Robert R. Holt, Walther Joel and David Shapiro, Seymour Klebanoff, Sheldon Korchin, Jose I. Lasaga, Julian Rotter and Shirley Jessor, Helen Sargent, Percival Symonds, and Ralph K. White.

column for the MAPS test because the sixteen MAPS interpretations were not analyzed separately. Because of the unreliability of the percentages, no attempt will be made to evaluate the values in the table rigorously; rather, the figures will be examined in terms of the general trends indicated by their rank order.

TABLE 1 *Items of Personality Description from the Rorschach and Other Tests*

	RORSCHACH	TAT (MEAN)	DAP	B-G	MMPI	W-B	THERAPIST
1. Pressures, forces, press	00	.5	2	00	00	00	00
2. Motivations, goals, drives	5	4	19	11	00	6	00
3. Outlooks, attitudes, beliefs	00	8	00	3	00	2	3
4. Frustrations, conflicts, fears	00	5	5	1	00	00	2
5. Affects, feelings, emotions:							
a. General, other than hostility	15	10	12	3	12	6	5
b. Hostility feelings	6	3	00	2	12	2	4
6. Sexual thought and behavior	7	9	9	5	00	00	3
7. Psychosexual level and development	5	1	9	1	00	00	00
8. Super-ego, values, ego ideal	00	2	00	1	00	00	00
9. Self-control, ego capacity	7	2	00	3	13	2	3
10. Self-concept, insight into self	00	2	9	1	17	4	1
11. Personality defenses and mechanisms	7	12	2	16	13	21	2
12. Reality contact, orientation	00	3	00	00	00	2	00
13. Interpersonal and object relations:							
a. General, other than parents	5	3	7	11	00	4	10
b. Toward/from parents	00	9	2	11	00	00	13
14. Perception, fantasy, language, thought	12	5	00	00	00	15	00
15. Intellect and abilities	3	2	2	00	00	23	00
16. Symptoms, diagnoses, etiology	23	14.5	22	27	25	13	18
17. Prognoses, predictions, treatment	5	4	00	3	8	00	2
18. Postdictions:							
a. Factual biographical data	00	2	00	1	00	00	12
b. Psychological biographical data	00	1	00	00	00	00	21

From Table 1 it would appear that nearly one fourth of the Rorschach items are in category Number 16 (Symptoms, diagnoses, and etiology). Other categories in which several items appear are Number 5 (Affects, feelings, and emotions), 21 per cent; Number 14 (Perception, fantasy, language, and thought), 12 per cent; and Number 6 (Sexual thought and behavior), 9 (Self-control, ego capacity), and 11 (Personality defenses and mechanisms), 7 per cent each.

By way of contrast the MMPI emphasizes categories Number 10 (Self-concept; insight into self), 17 per cent; Number 11 (Personality defenses and mechanisms), and Number 9 (Self-control and ego capacity). The distinguishing feature about the TAT interpretation is the spread of TAT items throughout all the eighteen categories—of course it must be remembered that this outline was developed from the TAT interpretations. It is of interest to note that there are TAT items in categories 3 (Outlooks), 4 (Frustrations), 8 (Super-ego), 12 (Reality contact), 13b (Relationships to parents), and 18 (Postdictions), where neither the Rorschach nor MMPI have any items.

The general impression from these data is that interpretations from the Rorschach concentrate on the important areas of affect, diagnosis, quality of perception (fantasy, language, and thought), ego capacity, personality mechanisms, sexual thought, and psychosexual level; that the TAT is more catholic and *perforce* less crystallized; and that the MMPI is concerned with symptoms, defenses, affect, self-control, and self-concept as the subject reports them. One practical implication of this point of view is that with an adequate Rorschach record one is relatively more independent of the case history than he would be with a TAT or MAPS record.

Another experimental study comparing the Rorschach with other tests is by Stone [25]. This dissertational study compares the Rorschach and TAT and is called "The Relationship of Hostile Aggressive Behavior to Aggressive Content on the Rorschach and TAT." * The following is quoted from Stone's conclusions:

* Two additional recent dissertations on a similar topic are by Borenstein [6] and Smith [23].

This study was designed to test the basic proposition that the Rorschach Test and the Thematic Apperception Test tap different levels of personality structure. Two hypotheses were set forth: (1) The acting out of hostile impulses should result in a reduction of tensions pertaining to these impulses which should be reflected in a lowered aggressive content score on the Rorschach Test; (2) A direct relationship should hold between the TAT and overt behavior. In other words, the acting out of hostility behaviorally should be reflected in increased aggressive content on the TAT.

If it could be demonstrated that individuals who act out their hostility on an overt level do in fact show decreased aggressive content on the Rorschach Test and increased aggressive content on the TAT, then we would be justified in inferring from this that as regards the dimensions of aggressive content and aggressive behavior the Rorschach Test taps a deeper, more unconscious level of personality structure than the TAT, which is more related to overt behavior.

Accordingly we endeavored to find groups of subjects who would vary in their overt aggressiveness. At the outset we settled on three groups which appeared to constitute a gradient from least to most aggressive. Group 1, the "least aggressive," consisted of 25 men confined to prison for going AWOL or deserting from the army while in combat in Korea. Group 2, the "medium aggressive," consisted of 27 men who went AWOL or deserted from the army while not in combat. These men also had a record of at least two previous offenses of a similar type. Group 3, the "most aggressive," consisted of 31 men who had acted out their hostility in an assaultive manner and were confined for this type of offense (murder, assault). In addition they had a record of at least two previous offenses of a similar nature.

Later considerations led us to doubt the possibility of including Group 1 on such a "gradient of aggression," however, and there is a strong argument for removing it from our consideration of the results. It is important to keep this in mind in reading the results summarized below since the data from the three groups are included there.

The Rorschach and Thematic Apperception Tests were individually administered to these three groups of prisoners. The material was then content analyzed and aggression scores were obtained for each prisoner on both tests. The Palo Alto Aggressive Content Scale was used to score the Rorschach responses and the TAT Aggressive Content Scale, developed by the writer, was used to score the responses on the TAT.

On the basis of the hypotheses stated above, certain predictions were made as to the relative standing of the subject groups on the Ror-

schach Content Aggression Score and the TAT Content Aggression Score.

Below, in summary form, are the results obtained:

1. Our group of military prisoners who acted out their hostility assaultively a number of times (Group 3) showed significantly less aggressive content on the Rorschach Test than those prisoners with records of a number of non-aggressive offenses in non-combat situations (Group 2).
2. The Rorschach Aggression Score of these assaultive prisoners was significantly higher than the scores of the prisoners of Group 1 (Men who were confined for AWOL or desertion in combat with no previous record of offenses).
3. Group 2 showed a significantly greater amount of aggressive content on the Rorschach than Group 1.
4. The assaultive prisoners of Group 3 showed a significantly greater amount of aggressive content on the TAT than the non-aggressive "repeating" offenders of Group 2.
5. Group 3 showed more aggressive content on the TAT than Group 1 (single offenders), and this difference was significant at slightly below the .05 level of confidence.
6. Group 1 showed slightly more aggressive content on the TAT than Group 2, but this difference was not significant (below the .1 level).
7. The assaultive prisoners showed a significantly higher aggressive content score on the TAT than did the Groups 1 and 2 combined (that is, with a common mean obtained).
8. There was no difference between the assaultive group and the combined non-assaultive groups on the Rorschach Test.

[The conclusions are as follows:]

On the basis of our original assumptions regarding the nature of the groups utilized in the present study, we must reject our hypotheses concerning the relationship of the Rorschach Test and the Thematic Apperception Test to overt behavior. If, however, we use our two groups which are most directly comparable with respect to our criterion, and eliminate from consideration that group which does not conform to a "gradient of aggression," then our predictions are borne out and our hypotheses verified. What this suggests is that the results do lend some credence to the basic proposition, cited above, that the Rorschach test does tap a deeper layer of personality than does the TAT. The results are not conclusive, only suggestive, but they do give sufficient support to the hypothesis to encourage further research in this area. [25]

Thus, to rephrase Stone's conclusions, the data do support the notion that the Rorschach taps deeper levels of personality than does the TAT; specifically, the content of the Rorschach records would seem to reveal mostly ego-alien aspects (such as hostility), whereas the TAT reveals more of the ego-syntonic features (such as how much of the hostility one can accept without its being ego-alien).

Comparisons among Picture-Thematic Tests of Different Degrees of Structuredness

The material in this section was taken from an unpublished experimental dissertation by Proud [14]. Although her study did not include the Rorschach, it has important implications for Rorschach theory. Her problem was to investigate the relationships between (1) the degree of structuredness in picture-thematic stimulus material and (2) the kind of responses elicited. Her general hypothesis was that "the more vague, ambiguous or unstructured the picture-thematic stimulus was, the more the subject would tend to project in making his responses, that is, to respond in terms useful to the clinician in drawing inferences concerning the subject's personality disposition, attitudes and conflicts."

Her design was an interesting one. She varied her stimulus materials in the following three ways: Using the MAPS test materials she either presented figures separate from the background (as in the MAPS test) or fixed to the background (as in the TAT); secondly, she presented the subject either with many figures (67 figures as in the MAPS test) or few figures (in this case, 4 figures); and third, she had backgrounds in which there were 13 or fewer separate details (the dream, the doorway, and the stage from the MAPS test) or backgrounds in which there were 21 or more details (the living room, street, or bedroom backgrounds). Thus her operational definition of "more structured" was: figures were *fixed* to the background, *few* (4) figures were available, and background had *many* (21 or more) details; her definition of "less structured" was: figures were presented *separate* from the background, there were *many* (67) figures from which to choose, and the background had *few* (13 or

less) details. She proposed six combinations of these elements, which she calls "Treatments," as follows:

- A. *Few* (4) figures *fixed* on a *detailed* (21 or more details) background.
- B. *Few* (4) figures *separate* from a *detailed* (21 or more details) background.
- C. *Many* (67) figures *separate* from a *detailed* (21 or more details) background.
- D. *Few* (4) figures *fixed* on an *ambiguous* (13 or less details) background.
- E. *Few* (4) figures *separate* from an *ambiguous* (13 or less details) background.
- F. *Many* (67) figures *separate* from an *ambiguous* (13 or less details) background.

Her basic experimental design is that of the Greco-Latin square. She states as follows:

In designing this study, it was considered desirable to have the stimuli presented and the procedure used conform as closely as possible to the usual clinical situation in which thematic projective techniques are used. This meant that each subject should be asked to respond to a series of stimuli. This has the added advantage for statistical analysis that each subject serves as his own control, as analysis was principally directed at analyzing differences in response as a function of the several "Treatments." In order to equate for any effects on response due to order of presentation or particular sequence, and to permit presentation of all six "Treatments" to each subject (at the same time presenting the six different backgrounds to each subject) a Greco-Latin square design was used. The Greco-Latin square was repeated three times.

The subjects consisted of 72 white male neuropsychiatric hospital patients, all veterans of World War II and all recently admitted to the hospital. They ranged in age from 21 to 49, and their Shipley-Hartford IQ ranged from 70 to 139. (Age, IQ and diagnosis were varied among the subjects who were given the same Greco-Latin row). The instructions given to each subject were those usually given with the MAPS test.

A detailed description of Proud's study will not be given in this

chapter. Rather we shall restrict ourselves here to quoting a summary of her main findings:

1. Greater tendency to projection in response as a concomitant of greater thematic stimulus *ambiguity* has been demonstrated in this study, provided that the following assumption can be made: Projection in response can be measured by response items concerning emotional reactions and interpersonal relationships of story characters. In this study it has been assumed that there is at least greater probability of projective material being incorporated in such responses.

2. The most effective method of "destructuring" thematic stimulus material, as measured by greater incidence of emotion-relationship items, is by decreasing background detail. It is suggested that background ambiguity may somehow tend to focus response upon the figures appearing in the scene.

Separating figures from background is *relatively* ineffective as a destructuring method in a *structured* background.

Increasing the number of separate figures for choice in populating a vacant background is slightly effective, but tends also to increase the amount of descriptive material elicited.

3. Defensiveness in response tends to accompany greater stimulus ambiguity. This is interpreted as indicating that greater ambiguity of stimulus material tends to be perceived as more threatening by the subject.*

All this points to a rather neat demonstration that relatively unstructured backgrounds do enhance projection. Some of the implications of this are that the less-structured Rorschach is a more effective type of stimulus than its more structured brethren, that the second half of TAT cards may be more useful than the first half, and that the positive drawing powers attributed to the MAPS test may be due more to the presence of vague backgrounds than to the presence of separate figures.†

* It may be of interest to indicate something of the manner in which Proud analyzed her results and what statistical procedures she employed. Each of the 432 stories (72 times 6), which constituted the raw material for the study, was scored for each of the eleven categories: number of words, number of thought units, and nine content scores. Inasmuch as neither normalized distributions nor homogeneity of variance could be assumed, analysis of variance could not be employed and instead nonparametric statistical techniques such as Friedman's Analysis of Variation by Rank and Wilcoxin's Matched Pairs Signed Ranks test were employed.

† Proud's findings find clinical corroboration from another source. As part of the task requested of each of the sixteen interpreters who participated in *Thematic Test Analy-*

TAT versus MMPI

The previous sections have compared the Rorschach with other tests, and the MAPS test with the TAT. This section goes further along the continuum from "least structured" to "most structured" and presents a study comparing the TAT with a much more structured personality test, the Minnesota Multiphasic Personality Test (MMPI).

It has been stated previously that the sixteen TAT interpretations of the one subject (which make up the bulk of *Thematic Test Analysis*) were analyzed into 802 discrete items of personality description and, further, that these items were subsumed under 18 categories of personality description. At this point additional information needs to be given: A random selection of 150 items was made from among the 1604 (802 items plus their contraries) so as to represent each of the 18 categories proportionately. In studies by Little and Shneidman [10, 11], these items, together with the subject's TAT protocol or MMPI profile, were distributed to 17 TAT experts, 11 MMPI experts, and 29 psychotherapy experts. These 57 clinicians were requested to Q-sort the 150 personality items according to Stephenson's method [24]. This means essentially that they were to sort the 150 items into 11 steps according to a normal curve distribution on a "most true" to a "most false" continuum. From the 67 Q-sorts obtained, tables of intercorrelations were computed. Cluster analyses [26] of the matrix of intercorrelations of the TAT and the MMPI interpreters yielded three groups (or clusters or factors) of judges for both the TAT and the MMPI. The items (from among the 150 items) that identify the three TAT and the three MMPI clusters are reproduced in Table 2, pages 607-608.

sis, a statement comparing the TAT and MAPS test was elicited (Chapter 15). Most of their remarks concerned the differences between the two tests and emphasized the fact that they believed that the TAT material appeared more structured than the MAPS test material, and that the TAT forced the subject to face certain situations so that the response was more stimulus-determined and the stories more closely related to the subject's actual past, whereas they felt that the MAPS test apparently allowed the subject greater freedom of response and thus permitted opportunities for response in which the emphasis for interpretation could be focused more on aspects of the subject's personality.

TABLE 2 Identifying Items for Clusters of Thematic Apperception Test and Minnesota Multiphasic Personality Inventory Interpreters

IDENTIFYING ITEMS FOR
THREE CLUSTERS OF
TAT INTERPRETERS

IDENTIFYING ITEMS FOR
THREE CLUSTERS OF
MMPI INTERPRETERS

CLUSTER A

Most True

He has incestuous desires that have precipitated intense conflict in him.
One of the main factors in his personality development was an extremely hostile, dominant mother.
He lacks positive interpersonal relations.
His deep conflict in the sexual area is between sexual impulses and super-ego restraints.
He feels deprived of the oral gratifications of childhood.
His aggression is aroused by illicit sexuality.
Sexuality is strongly rejected by him.

He suffers from feelings of rejection.
He is in the early stages of paranoid schizophrenia.
He has strong latent homosexual feelings.
The psychological threat to him is really of a homosexual rather than a heterosexual nature.
He has an enormous amount of hostility.
He would be threatened by interpretations given early in psychotherapy.
His principal conflict is in the sexual area.
He has at least bright-normal intelligence.

Most False

He has little conflict over his incestuous sexual impulses.
He has satisfactory interpersonal relationships.
He has resolved the conflict between his sexual needs and his interpretation of his mother's standards.
He shows little guilt over his incestuous sexual impulses.

He does not have much anxiety.
He should be able to progress satisfactorily in therapy without excessive support from the therapist.
Masturbation creates no psychological problems for him.
He seems little concerned with his bodily well-being.
His ideation is not paranoid.

CLUSTER B

Most True

His principal conflict is in the sexual area.
His reaction to sex is shame.
He does not show any indication of hallucinatory behavior.

The total picture is consistent with a schizophrenic disorder with potential paranoid and hebephrenic coloring.
He avoids social disapproval by engaging in solitary activity.

CLUSTER B

Most True (continued)

He is probably not disoriented.
 His thinking processes are well preserved.
 He is not confused.
 He appears to be a solitary person.
 An acute break with reality has probably occurred.

He has never learned to solve his problems by other than avoidant means.
 He has never adequately learned social skills.

Most False

He displays certain catatonic features.
 An acute break with reality has probably occurred.
 There are some indications that he has cosmic delusions.
 He is entirely out of contact with reality.
 He seldom uses self-punishment mechanisms.
 He appears to be an outgoing person.

For him, withdrawal appears to be a relatively unimportant mode of reaction to frustration.
 He has very little guilt feelings concerning his aggressive impulses.
 He has the well preserved mind of a person who is not psychotic.
 He is probably not disoriented.

CLUSTER C

Most True

An acute break with reality has probably occurred.
 His thinking is characterized by highly symbolic autistic processes.
 His verbal peculiarities are many and rather striking.
 There is some straining for effect in his use of language.
 He is in the early stages of paranoid schizophrenia.

He perceives the world as consistently unloving.
 He has marked guilt feelings.
 His guilt feelings may overwhelm him.
 He feels deprived of the oral gratifications of childhood.
 He suffers from feelings of rejection.
 In fantasy he longs for kind parents.

Most False

His thought processes are orderly and well-knit.
 He has the well preserved mind of a person who is not psychotic.
 His thinking processes are well preserved.
 He is not confused.

There are no paranoid ideas of reference or malign influence.
 He feels that generally he is a master of his fate.
 He has little orality.
 His super-ego is relatively mature.

As can be seen by an inspection of the TAT and MMPI clusters, the TAT items are primarily those that can be described as longitudinal, historical, or dynamic, whereas the MMPI items can best be described as cross-sectional or diagnostic. These results are consistent with the findings tabulated in Table 1 (and presented on pages 598–600) and suggest that there is a continuum of “depth” to “surface” from the “less structured” tests (like the Rorschach) through the MAPS and TAT to the “most structured” tests like the MMPI. The reader should be cautioned at this point that this seeming continuum may reflect more than simply the relationship between test stimulus and the subject; it may also involve the examiner-subject interaction or even might, in part, be a function of the interpreter (that is, Rorschach interpreters tend to interpret more “deeply”).

Points of View

This section of the chapter is devoted primarily to the citation of various points of view specifically concerned with the relationship of the Rorschach technique to other psychological procedures. We turn first, however, to quotations from several psychologists concerning the definition of “unstructured” or “ambiguous” stimulation in general.

1. From the field of social psychology we learn from Luchins [12] that the term “ambiguous” is more accurate than the term “unstructured.” Note his definition of “ambiguous” in the quotation below. He states, in part, as follows:

The term *unstructured*, although frequently employed, is generally not carefully defined. Literally it means non-structured or structureless. But what stimulus object has no structure? And if it is structureless, what distinguishes it from its background, and how does one perceive it? . . . The term *unstructured* has been applied to such objects as ink blots.

Certainly the nature of an ink blot may be altered if its parts are altered; therefore, strictly speaking, it is not an and-summation. A more appropriate descriptive term is *ambiguous* where ambiguity refers to the fact that the situation does not possess properties which impose only

one clear, persistent organization, but that it is compatible with various figure-ground relationships. [12, page 27]

2. Another point of view, this time from general psychology, is by Secord [16]. It is especially interesting because, according to his definition of structure, the TAT is less structured than the Rorschach test. The quotation from his article is as follows:

A consideration of the structured-unstructured continuum as applied to projective techniques may prove fruitful. There is much confusion over what constitutes an unstructured test, as Luchins has noted. Most of the confusion has been brought about by a failure to specify *what* is structured. Some discussions refer to the test materials; others include parts of the test situation. For example, it is usually stated that the Rorschach test is less structured than the Thematic Apperception Test. This is true only if the concept of structure is limited to test materials—ink blots are less structured than pictures—but this conception of structure is entirely inadequate. Suppose that a *structured test situation* is defined as one which reduces the person-to-person variability of the definition of the test situation to a minimum. This means that maximum structure is obtained when the test situation taken as a whole has precisely the same personal meaning from subject to subject. It should be noted, by way of illustration, that the Rorschach test is not defined in the same fashion by each testee. One subject may approach the task cautiously, concerned about making a good appearance, another may react against the situation by giving few responses, and still another may spontaneously enjoy the test situation.

A multiple choice vocabulary test is a good example of a highly structured test situation. The individual knows that the object of the test is to show the extent to which he can select correct synonyms for the stimulus words. He knows that he is supposed to make "right" answers. In accordance with the design of the test he is generally motivated to make a high score. He knows that his selection is to be limited to the five possible answers listed alongside each stimulus word.

It is easy to see that according to the above definition of structure the test materials themselves are not the major determinant of structure, although they may play some role in controlling ego-communication. What is important in determining structure is the kind of ego-communication and object-communication made possible by the test situation, including the test materials. Ego-communication and thus the definition of the situation is usually controlled less by the test materials than by aspects of the situation, such as the actions of the examiner,

the events resulting in the subject's decision to take the test, his previous experiences with tests and test situations, his specific conception of the test, his characteristic interactions with persons resembling the examiner, the test instructions, etc. Object-communication is controlled directly by test materials and indirectly through ego communication. It would be possible for a test with very ambiguous materials to constitute a highly structured situation. For example, the Rorschach ink blot test could be converted into a more structured test of very limited coverage (and utility) by substituting for the usual instructions the task of reporting all the profiles of human faces that can be found and informing the testee that the test is simply a measure of the perceptual ability to find specific hidden figures. This would greatly reduce the person-to-person variability of both ego-communication and certain aspects of object-communication. The definition of the situation, in this instance, is constituted primarily of the conception that the chief function is to find as many faces as possible and of the dynamic implications that this interpretation has for each individual subject.

If the Rorschach and the Thematic Apperception Test are considered in the light of the present definition of structure, it is found that the Thematic Apperception Test is somewhat less structured than the Rorschach test. The Thematic Apperception Test items consist of pictures with human figures in them, and the testee is asked to make up a dramatic story about each picture. The picture is the *starting-point* for each story, but from that point on the creation of the story is largely on the basis of fantasy. It is like an association test in which the psychoanalyst mentions a word or topic to which the subject responds by relating a chain of associations. The testee is free to define the task of making a "dramatic story" within wide limits, and to respond accordingly. The conditions for the Rorschach, however, require that the ink blot be organized into some sort of visual experience each time a response is given. This means that because of the nature of the test situation the ink blots themselves play a much greater role in limiting variability of response than do the Thematic Apperception Test pictures. [16, pages 78-80]

3. A critical but provocative discussion of the results of ambiguous or equivocal stimulation is that by Gibson in the book edited by Dennis, *Current Trends in Psychological Theory* [8]. His statements would seem to be directly critical of the points of view implied by the author of this chapter and are worthy of presentation to the reader. He writes as follows:

The largest of all the current fields of interest in perception, measured by man-hours of effort, is concerned with the so-called projective tests. When a man looks at an ink blot, for example, he is said to "perceive" any of a variety of objects, people, animals, or events. Perceiving is not the right term for it, but neither is the term imagining, since the blot plays a part in inducing the experience. An attitude must be adopted by the subject somewhat similar to the attitude we adopt in looking at a picture or representation. There is an element of searching in it, and the situation must be taken as a task or a game. If a subject reported simply that he saw an ink blot, the psychologist would be completely frustrated. The impressions aroused are said to be "projective," that is, to have apparent external reference, but actually to be of internal origin. This term also is imprecise, since only a hallucination is fully projective in this meaning. The situation might be called a *game of controlled misperception*.

The Rorschach ink blots contain gradients of texture, shading, and color, including moderate gradients of varying definition, and steep or sharp gradients, the latter tending to produce margins. In this respect it is like an ordinary photograph, but the essential characteristic of the ink blots is that these are not the specific gradients and margins which yield the surfaces and edges of objects in a photograph. The edges and surfaces which emerge in experience are ambiguous or equivocal. There are stimuli for corners, curves, indentations, protuberances, and interspaces in the ink blots, but these stimuli are mutually discrepant or conflicting. Since the spatial properties are not consistent, the objects are not consistent and what is seen can be almost anything. The orthodox description of the ink blots is to say that they are "unstructured," borrowing a term from Gestalt theory, but this is a poor word since it has never been clear whether the physical stimulation lacks structure or whether it is only the perception which is unstructured or, for that matter, exactly what the term structure means.

If the terminology of Rorschach testing is inexact, the theory is nothing less than chaotic. In order to understand what the subject sees and reports, we should have to have a theory of visual meaning, imagination, or fantasy. What the subject sees has proved to be, in some degree, diagnostic of his personality. But more important than what he sees has proved to be the determinants of what he sees—whether the things he reports are constructed out of the variables of shading, or of texture, or of color, or of form. His relative sensitivity to these components of everyday perception is seemingly even more deeply diagnostic of his personality than is the content of what he reports. For this paradox there is no theoretical explanation whatever. The principle has been

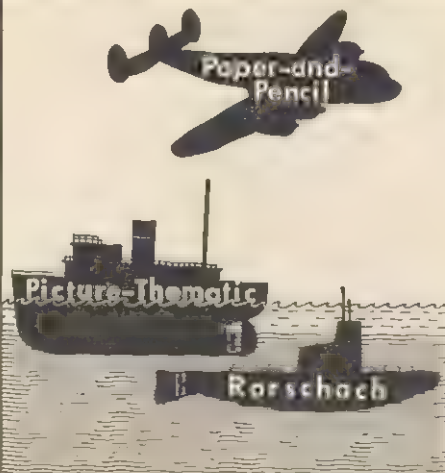
suggested that "perceptual organization is the key to personality organization" (Bruner and Postman), but this statement is scarcely more than a play on words. In a sense, the viewing of Rorschach cards seems to be a strange and peculiar form of space perception. If this is true, a theory of space perception is required before the Rorschach riddle can be solved. We must analyze space into the basic phenomenal variables of which it is composed—surfaces, colors, edges, shapes and their combinations—and we must discover the gradients and steps of stimulation which regularly elicit them if we expect to understand individual differences and personal predilections in this kind of human activity.

Clinical psychologists tend to accept the generalization that perception is a creative process which constructs the world to suit the perceiver—that we see things not as they *are* but as *we* are. In this respect they follow the social psychologists except that they emphasize the bias of personality instead of the bias of culture. The danger consists of being led into a kind of undisciplined philosophizing about perception which can only distract them from scientific pursuits. [8, pages 96–98] *

Now let us turn to what some clinical psychologists working within the field of projective techniques have said about the relationships among tests.

4. In an article in the *Journal of Projective Techniques* this writer attempted to illustrate his notion of the relationships among tests [18]. This formulation is represented schematically on page 614. It should be stated that such a presentation has the characteristic of oversimplification rather than rigor. According to this oversimplified scheme, the paper-and-pencil personality tests, which employ direct interrogation and which must be answered either as "true" or "false" by the subject, operate mainly among conscious attitudes and reflect mainly those defensive psychic efforts amenable to conscious control; at the other extreme the Rorschach technique is able to go "deeper" and get at the primary ways in which an individual perceptually organizes his world—ways of which the individual is mostly unaware or unconscious. With the picture-thematic tests, which would seem to lie between the paper-and-pencil tests and the Rorschach, the sub-

* The reader is reminded that Gibson's formulation is not dissimilar from that of "structural psychology"—and that many of the perplexing questions raised by the structuralists were answered satisfactorily by other formulations which denied the essential meaningfulness of the questions.

Level of Awareness	Type of Test	Type of Perception
CONSCIOUS		EGO DEFENSIVE
PRECONSCIOUS		PSYCHO-SOCIAL
UNCONSCIOUS		PRIMARY

Schematic representation of the relationships among tests.

ject thinks he is at the helm exercising conscious control, but actually those forces that are comparable to the engine, the propeller, and the rudder are below the surface of consciousness, giving impetus and direction to the entire production. Because the stimulus material of the picture-thematic tests typically contains "human-like" figures, the kind of perceptions would seem to be those of interpersonal or psycho-social relationships. It has been suggested to the author that, following this scheme, the clinician's task in interpreting picture-thematic tests is to stand on the deck and peer over the side to note the revolutions of the propeller and the direction of the rudder and to make sure that he does not fall in himself.

5. Another point of view is that presented by Bellak [3, 4] in which he divides projective methods into five types, and assigns the specific techniques as follows:

A. *Methods based upon the study of the perceptual contents.* Here we are concerned with *what* the subject says. The TAT and MAPS tests are the best examples. To a certain extent the Rorschach inquiry and Finger Paint method also belong in this category.

B. *Study of expressive, structural aspects.* The main inquiry is directed toward *how* the subject says or does something. Here we refer to techniques such as the Mira, Mosaic, Rorschach, and graphology, which belong to the subsemantic levels of myoneural functioning insofar as these are valid procedures for the understanding of personality factors and structures.

C. *Gestalt functions, as exemplified in the Bender Gestalt, the Mosaic, and the Rorschach (W, S, d, dd, etc.).*

D. *Body-image or self-image.* Figure drawing is primarily predicated upon this approach. It enters into the Rorschach, for example, when the subject identifies with puppets, and in the TAT, especially when the subject sees the hero as crippled (3 BM), or the violin broken and/or "dead" (No. 1), or identifies with an athlete (13 BM).

E. *Methods of Preference.* Outstandingly, the *Szondi* is based upon a system of *selective choices* as personality indicators. Color choice in finger painting, selection of figures in doll-play, as well as in the MAPS test, all come into this category.

It is apparent that all five organismic aspects enter into every one of the projective methods, although they do so in varying degrees. One might keep these categories in mind for the selection of techniques in each individual problem of diagnosis, either for the purpose of having a rounded battery, or for selecting the one test for a specific clinical need. Principally, one might use these five variables for a systematic inquiry into the test results of any one technique. [3, page 3. *Italics in original*]

6. Perhaps the most systematic *a priori* schematic arrangement of different psychological tests is that by the Netherlands psychologist Van Lennep. His thinking about projective phenomena is set down in its most full exposition in his book *Psychologie van Projectieverschijnselen* [27]. Eschewing the coining of new words to describe the phenomena he wishes to discuss, he calls the projective phenomena simply Projection I, Projection II, Projection III, and Communication. They are summarized as follows:

Projection I. This type of projection has to do with one's "mood" relationship to his physical environment. One cannot isolate the individual from his world; to know the individual one must know his world; the individual is reflected in his world; the individual and his world are a unit. This type of projection is a one-way relationship between the individual and his world—only the individual has a

frame of reference; things, *per se*, do not. "Moods are aspects of our personality by which we are aware of our position in the world and of things we see, and both simultaneously reveal themselves." [22, page 263] This type of projection indicates "the way we are situated in the world"; at the same time, "the world is constantly rendering us our own position." This is the *mood* which we impose on things. (For example, a new hotel room may at one time appear "rejecting"; a week later, it may be "friendly.") This type of projection is non-pathological; it is inevitable in all perception. To tap Projection I, Van Lennep believes that actual life situations are best, but that one's responses to visual stimuli such as the Rorschach cards also may indicate how one experiences his world.

Projection II. This type of projection recognizes that the world is populated by other individuals (in addition to "things") and that they have frames of reference of their own. We react to other persons and attribute to them the motivation of our affects. For example, where B threatens A, A will develop self-defense. The "bad" features of what A thinks or feels (threat) will be projected, but the threat itself is not projected; rather B is treated as though threatening. We do not project fright; we call the other frightening. Projection II is thus similar to Freudian projection and the classical formulation of the etiology of paranoia; it is Murray's "complementary apperceptive projection." To get at Projection II, Van Lennep feels that we must look to real life mainly, but possibly that pictures with specific and detailed backgrounds like the MAPS materials might work. He feels that pictures are not as real as real life, thus they are not as threatening and hence less useful.

Projection III. When one uses the other person as a screen on which to reduplicate himself, he is projecting in this third way. Here the process is not self-defense (II), but self-objectivation. The other is used as an object or a thing; one does not in this process (III) take account of how the other is, or that he is otherwise. Both good and bad aspects of character are projected. In this type of projection we call the other frightened, rather than frightening (II). Projection III relates to one's need to "objectivate" oneself—to make the difference between "I" and "me" as real as possible, in the attempt to

know oneself completely as one really is. One can never do this, but one keeps trying. (The alternative to Projection III—the attempt to systematize the relationship between our awareness of ourselves and the omnipresence of ourselves—is to forget this distance in such activities as love, orgasm, mysticism, or alcohol.) Projection III is best tapped through pictures rather than real life. The TAT and the FPT (Four Picture Test) are most useful here. This is so because a real human used as a screen will be defended against; thus the unstructured picture of a person is the best screen.

Communication. When one is openly aware of the other's being otherwise, can really observe his expressions, realize his uniqueness, listen undefensively to his ideas, and experience him as another person, then one is communicating. When one communicates one does not project. The result of communication is self-realization and growth. Communication is measured in real life and not by pictures.

In summary, Van Lennep states as follows:

. . . a person is never completely one with himself, he always regards himself from a distance. Just as he can never completely forget himself, he can never completely distantiate himself from himself by confronting himself in the real sense of the word with himself. It seems as if in the process of projecting on a fellow human being he tries to distantiate himself completely from himself. The projection is probably based upon the excentric position * of the human being, and is then active when the other calls up affects in us from which we would like to distantiate ourselves completely. In that case we use the other as an "analagon" of ourselves, and attribute to him our own personality, redoubling ourselves on him. . . . In communication I become myself by being completely receptive to the full meaning of the other's being "otherwise"—where I am in communication with the other I do not project myself upon him—; only as far as there is no communication, an opportunity exists for projection. Projection is indeed a non-communicative behavior, in which I distantiate myself from the other in wishing to distantiate myself from myself. [27, page 247]

This view of projection by Van Lennep involves the concept that the present writer calls the subject's "projectwin" [18]. Whereas the

* By "excentric position" Van Lennep means that, in projecting, the individual is "out of the center" of himself.

Rorschach protocol seems to show the individual more as he is, in the picture-thematic test the protocol is not so much about the subject himself as about the subject as he *reflects himself*—it is about the subject's alter-ego (his twin identity born simultaneously of the same womb) and includes the subject's defenses against recognition, his fears, aspirations, and so on. To use an analogy, the thematic test seems to give the picture someone wants to give of himself whereas the Rorschach gives the clinician more of a chance to look at the person who is working the projection machine. The thematic tests show more the projection; the Rorschach shows more the projector. From the Rorschach one might say "This subject is . . ." but from picture thematic tests one should better say "This subject sees himself as. . . ." All projective tests yield data that can give clues to the nature of the subject's perceptual manipulations: the Rorschach shows the ego in action working its defenses; the picture-thematic tests (TAT, FPT, MAPS) give information especially about the subject's psycho-social perceptions as enacted through his projectwin.

7. A cogent statement by a clinician—giving his rationale of the differences between the Rorschach, TAT, and Wechsler-Bellevue Scale, and emphasizing the importance of administering and interpreting a *battery* of psychological tests—is that by Schafer in *Psychoanalytic Interpretation in Rorschach Testing* [15]. He writes:

From what has been said so far in this chapter, however, there is good reason to think that tests may show up the patient at his "worst," that is, at his most anxious, defensive and regressed. After all, we ordinarily do function with external props and cues, with some measure of control, with some safeguards of secrecy and with some choice of relationships. Taking tests is being severely put to the test. It is, however, particularly the projective tests that are so taxing, and most of all the Rorschach test. The Rorschach test introduces the greatest loss of reality support, or, as Baer has put it, "loss of objects." In contrast, the Thematic Apperception Test at least shows relatively familiar situations, and the stories are subject to conscious and unconscious manipulation on some basis that satisfies the patient to some degree as to their safety or appropriateness. It follows that test interpretation must be incomplete unless we use additional tests, tests which are less "projective" than the Rorschach. We need material that will help us approximate

both the "best" functioning of the patient and his functioning under "average" or "usual" conditions.

For this reason the TAT, which comes closer to real-life situations and fantasies than the Rorschach test, and which is better structured at the same time as it remains quite personal, is valuable in a test battery. By putting the patient in a situation more like those he encounters in daily life, and in which he has more or less well established modes of response, the TAT helps us get a balanced picture of the patient's adaptive and defensive assets and strengths. These assets and strengths may well be minimized or obscured by the Rorschach test.

For the same reason a test like the Wechsler-Bellevue Scale is valuable in a test battery. The items of this test are relatively objective, impersonal and structured. It is a "test" of the sort one would feel familiar with from school experience. And, as Rapaport has shown, it is a test that taps a variety of intellectual functions that are usually relatively remote from internal conflict and therefore relatively stable—even though they do vary in vulnerability to emotional stress. Excepting anxiety over intellectual success or failure, the prominent and explicit intrusion into the intelligence test situation of personal preoccupations and interpersonal problems strongly suggests significant chronic ego weakness or overwhelming of the ego by the patient's conflicts.

In the testing of borderline psychotic patients, for example, it is not unusual to obtain perfectly orderly intelligence test results, TAT stories that are pathologically perverse, morbid and eerie in content but logical, well organized and verbally faultless in form, and a Rorschach test replete with confabulations, peculiar verbalizations, arbitrary forms, pure C and the like. Schematically, one may say that the Wechsler-Bellevue Scale brings out such a patient's non-psychotic side—his more or less preserved capacity for realistic, objective thought and action, that the Rorschach test brings out his psychotic side—the underlying chaos and virulent autistic potential, and that the TAT brings out the in-between or borderline forms of autistic-realistic thought and action that characterize the patient's spontaneous, personal but socially oriented responses in daily life. Thus, the three tests together show us the patient's range, from "best" through "usual" or "average" to "worst," with a clarity and forcefulness that no one test alone could achieve. [15, pages 65-66]

Clinical Example

In this section of the chapter a case will be presented to illustrate the different roles the various psychological tests play in the psycho-diagnostic battery. The emphasis will be on the different levels of personality tapped by the various tests, as indicated in the global clinical evaluations.

This case is that of a 32-year-old male who was a patient in a TB ward of an NP hospital. This case is reported in considerable detail in the 1952 volume of the *Journal of Projective Techniques* as "The Case of Jay" [19].

The presentation of this case in this chapter will be in terms of *protocols* (consisting of samples of the test data from "The Case of Jay"), *interpretations* (consisting of excerpts from the blind analyses of the tests by expert clinicians), and *correlates* (consisting of comments that direct the reader's attention to the "level" of psychological functioning discussed in the interpretations). This three-category approach will be applied to four of the eleven tests administered to Jay: the MMPI, TAT, MAPS, and Rorschach.

Protocol: Minnesota Multiphasic Personality Inventory

Jay's MMPI profile was as indicated below:

T Score	50	56	62	55	52	68	65	66	98	50	58	65	63
Scale	?	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma
Raw Score	0	6	8	15	12	24	25	26	45	8	27	30	22

Protocol: Thematic Apperception Test

Four of the sixteen stories told by Jay to the TAT are given below.

#2 (*Country scene*)

My first feeling about it was that it was much in the style of Henri Rousseau's paintings . . . it has a very stark and primitive quality . . . I'm impressed by the fact that the man and woman are back to back, that is they are . . . a feeling of estrangement

. . . The woman is carrying books and looks intellectual, that is, she . . . they are . . . thoughtful books. The woman at the right is carrying the child . . . There is a sort of biblical feeling about the picture, that is, the . . . the externals are modern but the . . . something simple and direct about it, it has a kind of biblical feeling for me. No one is particularly interested in anyone else in this picture. They are each lost in kind of individual or personal world of their own. I think's all I can say, if I were going to title it, I would call it . . . well I don't know, I have a feeling of . . . it would be . . . Apartment, if I may say that of the people that impresses me most. I think that's all I have to say about it.

#3BM (*Huddled form on the floor; beside him is a revolver*)

I am immediately reminded of Matisse, another painter. Very bold linear quality about it. It is a painting, I think. It might be a sort of retouched photograph but . . . It's a very interesting as a painting, I think. The feeling, of course, is one of dejection or despondency and I am made sort of uncomfortable by the position of the woman, the raised shoulder and the crooked neck. The object on the floor is apparently a gun . . . I'm not sure of that . . . but I make a gun out of it. I am sort of repelled by the mood of it, but I like the composition of it very much. If I were to give you the title . . . it has some bearing on the despair of this woman but . . . (Could you say what led up to the situation in the picture?) If she has been rejected or disapproved of I think . . . she feels the loss of someone . . . which is what rejection means to her. I don't know what specific incident . . . happened . . . but someone close to her has left her. And, of course even as I speak her sex changes almost as I'm looking at this and she becomes more of a man and so I suppose more like myself. In that I identify with men more easily than with women and I can understand rejection as felt by a man, or at least I feel that men have my feelings and women I don't understand, and I never can quite comprehend that feelings that women have are like the feelings that I have.

#13MF (*A young man is standing downcast. Behind him there is a figure of a woman lying in bed*)

Well the man has either just attempted . . . sexual intercourse with this woman, or realizes that it is out of the question and is consequently grief stricken at that. The woman is indifferent, but well I think, I feel that it is the woman who has . . . it doesn't make her indifferent if I continue this way . . . it is the woman who has developed this situation, that is, she has lead the man into it. She is probably a little provoked by its failure and therefore not indifferent. One of the two is bookish, I would say the man probably, since I associate bookish people with a certain indifference to sexual intercourse or other manifestations of sex. Not really, I mean, in some cases I do . . . I feel that books are related to the situation, however. I do feel that it's through a failure to consummate this thing that the man is feeling . . . probably a mixture of grief or humiliation . . . inadequacy. Of course, it would be with the man that I would identify here. The worst part of this whole thing is trying to give titles to these things. It seems useless to me. I don't know what to title this one either. I don't feel much sympathy for the man either, I will say that! May I stop here rather than try to think of a title for it? (What would you say their relationship might be?) Well they are friends rather than lovers and they are not married or not related. Possibly they are related. I mean the first instantaneous thing that I thought was that they were brother and sister. I mean there's a truer feeling about it than anything I have said since. I keep wondering whether in these . . . the case with which I identify with these pictures makes me wonder if there is a set for dark men and a set for blond men . . . because I notice so many dark men in all of them. The man is leaving I might say. He isn't just standing there and he's going to leave the room. If the people are lovers, then it's humiliation he feels. If they are brother and sister then the feeling is one of shame. So it depends. I don't know what their relationship is. I think that exhausts this.

#16 (*Blank card*)

Well, I see a circus, a childhood situation where there is a great deal of activity and color and excitement. A merry-go-round in the right foreground, I imagine that. A lot of balloons and cotton candy and a carnival atmosphere throughout the whole thing. There are lots of people, of course, there. No one is . . . no one predominates in the situation that I see, just a lot of people. I'm present there in my present capacity of just looking at it, I don't see myself much in the picture. I suppose there is a sideshow tent or something on the left here and the movement is into the picture between the merry-go-round and the sideshow back into more of the customary circus attractions. There is no narrative in this either. It's just a thing that I have experienced before perhaps although I don't recall ever having been to the circus. It's a static picture, I mean, one in which a story is developing even though there is movement, a great deal of movement within that static picture, but nothing involving me except as an onlooker. I'm merely observing. I guess that's what I see. (Title?) Well, Circus, or something like that would be a nice antiseptic title.

Protocol: Make a Picture Story Test

Four of Jay's nine MAPS stories are reproduced below.

BATHROOM (Selected Figures M-1, M-2)

Well here we have a situation where . . . it would be natural for two men to be together unclothed. One is preparing to take a bath and the other is removing his clothing in order to take a bath afterward. The man who is completely unclothed is in an attitude that indicates that he is uncomfortable about his nudity and the man removing his clothes is aware of this and . . . is rather . . . pleased in seeing the other man's . . . in seeing the other man's discomfort. The man removing his clothes doesn't feel any compunction about it. (Pause) One of the persons is myself but I don't know which one. I feel I could be either one. I think of it as being an unpleasant situation so therefore I must be the man who is completely nude. (Laughs) I . . . The man that's undressing

now, gives it not much thought. The man who is about to take a bath is relieved when it's over, but he's annoyed with himself for feeling . . . the feelings that he had. He wishes it were not such an issue. I guess that is it. (Title?) Oh, (sighs) something emphasizing the unpleasantness of it, I think.

DREAM (Selected Figures M-11, F-6)

The woman pictured here in the corner is thinking back . . . she's . . . this is a representation of a fantasy that she is involved with now. She is . . . she's my mother . . . she's thinking back to the time when she separated from my father. It's a distorted picture that she has . . . in which the . . . the role of the people involved are reversed pretty much. It represents a sort of wish that it had been this way rather than the way it actually happened. Actually, my father never threatened my mother, but on the other hand he aggravated her in the hope, I think, of causing her to do some kind of physical violence to him in order that he would feel justified in leaving. The woman . . . young woman in the picture here feels herself abused whereas actually it was the other way around. My mother thinks of this often and wishes it might not be so . . . might not have been so. The children are around someplace. I don't see them in the dream. They know this is going on however. I would call it An Altercation in a Dream.

BRIDGE (Selected Figures M-3, N-5, M-18, I-2)

These are people that I have verbalized about before. I put them here just to see if I might guess what they are doing or . . . think about them in another way. They are all people that attract me. And the reason is that they are all victims of circumstance and . . . people in an unfortunate position, and people who can be helped and who are apt to like me for helping them. I am none of these men but I'm like all of them. The man on the left is in the Army. That is, he is subject to discipline. There isn't a lot he can do about his predicament and I don't like to admit that of myself, either I don't want to feel that it's true but I feel certain kinship with him. He is being wasted. The next man is colored for one

thing and a victim of his . . . of circumstances beyond his control. Well, the Army always controls it. He has been forced into this situation by his color rather than by his . . . by outright violation of the law. I mean it's understandable in terms of his . . . my interest in him is no interest at all, it's . . . The next man is on crutches. My father carried crutches when I was a very young person. It is my first recollection of my father . . . on crutches . . . and my interest in him as in the Negro . . . shows me in some way that I'm not interested in him as a person but . . . sort of selfish reason, working negatively some way. The fourth man is just simply unable to face his life and he is despondent, therefore capable of responding to interest in him and would be certain to like me if I showed interest in him. And they're all on the bridge. (Can you title it?) No, I am just reminded of my own feelings of guilt over not really loving people. Just a little one: Four Men on a Bridge.

BLANK (Selected Figures M-17, N-8, F-1)

This is an environment which is familiar to me . . . I mean, familiar to me. I am the young man drawing here, I'm in a classroom and there's a nude female model posing. And watching me is a teacher. Of course, I recognize that he's also the doctor in one of these previous pictures. This is a situation where I am at ease . . . where I can easily succeed; get approval. It's a situation where I can indulge a certain interest in woman in secure surroundings, that is . . . easy to be curious and at the same remote in an art class where a model is posing. There are other people in the room here. I didn't bother to indicate them. I felt it would be enough to show myself and the professor and I put the professor in to emphasize the safety of the situation as far as I'm concerned. (Pause) My feelings are mixed, I'm interested in the woman and also a little bit . . . pleased to know that I'm not dangerously interested. The professor likes my work, but I'm not completely satisfied with it. I'd call it, An Hour in Class in Art School, and let it go at that. I feel it's unnecessary to describe the room. I think all art room classes or classrooms are the same.

Protocol: Rorschach Technique

Only the complete performance proper of Jay's Rorschach record (without the inquiry and the Graphic Rorschach) is reproduced below.

CARD I

5"

1. It reminds me of a . . . two or three vertebrae.
 2. A butterfly.
 3. A woman with, oh, wings or cloak, of some sort, flying out behind her.
- 43"

CARD II

10"

1. A mask.
 2. Two animals rampant and facing each other.
 3. Two persons playing pat-a-cake or something of that sort.
 4. Two animals with their snouts in contact. There are the heads of animals.
- 65"

CARD III

5"

1. Ice skaters.
 2. Dancers.
 3. Two men in evening clothes, bowing to each other.
 4. A butterfly.
 5. Two men warming their hands at a fire.
- 50"

CARD IV

6"

1. A very foreshortened view of a man, prostrate, his feet toward me.
 2. A bovine animal peering out from a thicket.
- 50"

CARD V

8"

1. A snail.
 2. Two persons reclining on their sides, and both propped up on an elbow.
 3. And a view of a bird, flying bird, seen from above.
- 55"

CARD VI

35"

1. Why, ah, female sex organs.
 2. A winged insect.
 3. And a pelt of an animal.
 4. A witch doctor or man in a fantastic costume that an African witch doctor might wear.
 5. An Indian rattle.
- 100"

CARD VII

8"

1. Two women. back to back, each looking over her shoulder at the other.
 2. A smiling mouth.
 3. Hands cupped together.
 4. Ballet dancers.
- 75"

CARD VIII

4"

1. Tropical fish.
 2. A rib cage.
 3. A, ah, piece of jewelry, say a brooch.
 4. Two lizards or iguana, iguanas crawling on rocks.
 5. The head-on view of a small Viking ship.
 6. And a snow-covered valley, surrounded by mountains, of course.
- 85"

CARD IX

3"

1. Lobsters.
 2. A coral.
 3. A . . . the head of a fox terrier.
 4. And again, vertebrae, pelvic cavity, perhaps.
- 60"

CARD X

7"

1. Marine life, with crabs and snails, shells, sea horses.
 2. A wedding cake.
 3. A celebration on a village green or something similar to that, people dancing and holding hands.
 4. Rose bud.
 5. And a robot.
- 95"

Interpretation: Minnesota Multiphasic Personality Inventory

The MMPI profile and answer sheet were included in "The Case of Jay," but there was no blind interpretation of the MMPI in the original case presentation. Subsequently, and specifically for this chapter, Dr. Harry Grayson wrote the following blind interpretation of Jay's MMPI profile. The only information the interpreter had about the subject was that he was male, 32 years old, single, and had had some college education.

The outstanding feature of this patient's MMPI profile is the tremendously exaggerated identification with interests characteristic of the opposite sex. In fact, his general interest pattern is considerably more feminine than that of the average woman. He attempts to present a socially acceptable "persona" and probably takes a great deal of pride in his cultural and aesthetic interests in the "finer" things in life. I suspect that he is a fairly bright but not brilliant person. Effeminate and perhaps theatrical behavior might be expected. Sexual maladjustment is probably pronounced. And although overt homosexuality is not necessarily indicated, it is a most likely possibility.

The diagnostic picture is complicated by features from different syndromes. Hostility toward parental figures and social sanctions is present to a fairly high degree. However, there are also indications of anxiety and guilt feelings which are not adequately kept in check by a Pollyanna kind of hysterical defense. In addition, there is some suggestion of an underlying schizophrenic substructure although the patient does not appear to be psychotic at this time.

The main diagnostic picture that emerges is that of a character neurosis (with probably pathological sexuality) in a schizoid individual. If a "break" were to occur, the prediction is that it would be in the direction of a "hysterical psychosis" with accompanying paranoid features.

Interpretation: Thematic Apperception Test

Dr. Robert R. Holt [9] did the blind analysis of the TAT for the symposium on Jay. In his report, he stated, in part, as follows:

My best guess about Jay is that he suffers from a severe character neurosis with obsessive, narcissistic, schizoid, and paranoid features (in order of their prominence). It is not inconceivable that he is psychotic, in which case it would be a paranoid condition of relatively short duration, but I think that he is not. . . . There is a very real question, however, whether or not he may be an overt homosexual. Certainly the evidence for a confused feminine identification and strong passive homosexual needs is overwhelming, but all of this is to some extent ego-alien, and the whole problem could conceivably be quite conscious. . . . And I call it a character neurosis because the mixture of pathological trends seems to be interwoven with a distorted personality structure, in which overt symptoms are not as important as (ultimately self-destructive) character defenses. Furthermore, there is little evidence of conscious anxiety; instead, we see avoidant defenses directed against Jay's having to face his problems. He seems to have a kind of chronic low mood, but this is not so much a depression as an expression of the way his energies are bound up in neurotic conflicts and defenses. . . .

I do not think that he has a very stable sense of identity. Certainly he has more or less conscious doubts about his masculinity. . . . He has chosen an identity that cuts him off from the group support of the culture. . . . He is a sufferer, almost a martyr. He is, or would be, an intellectual esthete. . . . this identity stresses artistic sensitivity and perceptiveness rather than creativity or being productive. . . . It requires that one be invulnerable: never taken in by people and indifferent to the allurements of sex. . . . It is a pretty nearly bankrupt identity, yet he clings to it, apparently knowing no other except perhaps that of a frightened, dependent child. . . .

He is capable of keen and sensitive observation, but with the following limitations. He grasps quickly the main flavor of a situa-

tion, being something of a specialist in atmospheric nuances, but is less good with practical details. At the other end of the scale, he has a projectively sharpened alertness to small significant details that may tip him off to what is going on behind the scenes. His is a more impressionistic and analytic than synthetic mind. . . .

Jay has not subjected his good intellectual ability to enough discipline to have made it pay off in much by way of intellectual achievement. . . .

A principal basis for the conclusion that Jay does not accomplish anything is the obsessional paralysis of the characters in his stories and of himself in telling them. He hates to be pinned down, and can find plenty of rationalizations for not making up his mind about almost anything. This is one reason for the heavy, static, torpid quality that hangs over the TAT like a pall. It expresses a languor, a flaccid passivity that pervades all of his personality. The obsessiveness also makes his thinking ruminative and associative: he rambles, rather than going to the point.

A more positive feature is Jay's psychological-mindedness. He is quite aware of and interested in the psychological dimension of human life and readily thinks of events in terms of their motivations.

An impression of far-reaching passivity is given by Jay's TAT. . . . It is hard to imagine Jay's doing anything, just as he cannot imagine anyone doing anything more active than looking or attending. Since Jay places high value on supporting oneself, being beholden to no one, there is a continual conflict between his dependent and independent needs. It seems characteristic of him not to solve his conflicts, but to remain waveringly ambivalent about them. . . .

Jay seems to have a number of the attributes of a dilettantish, arty homosexual, including a conception of women as consistently hostile, callous, unsympathetic and generally alien creatures. . . . These straws point to a lot of conflict about sex, with passive wishes to be overwhelmed by a man underneath it. . . . Jay tells us directly that he has never been in love and he has undoubtedly never had any satisfactory sexual experiences. . . .

It appears that it is very hard for Jay to express any aggression in other than indirect ways. . . . Jay complains of inability to feel deeply. . . . At times he may even feel somewhat depersonalized. Despite this armor, he is vulnerable to hurts. . . .

One of the most striking things about this TAT is the concentration of the characters on looking, watching, and seeing.

The patient apparently feels that he has little in common with most people, and is unable to empathize with them. His way of understanding a person is to see through him, and to feel superior for it. He is likely to be passive in relation to women; if he has any sexual interest in them, he hopes to be the pursued rather than the pursuer. . . .

The historical background for these relationships would seem to have been a family in which there was not only little love, but not even much contact between the members. . . .

Such is the picture of Jay as it comes out in his TAT. He is a young man so bound up in a variety of pathological character defenses that he can hardly move, and can conceive of happiness only as the absence of trouble, to be sought in the solitary absorption, through eye or mouth, of some of the world's goods. . . .

Interpretation: Make a Picture Story Test

The blind interpretation of Jay's MAPS test was done for the original symposium by Dr. Reuben Fine [7]. Some selected quotations from his complete interpretation are given below.

What we are struck with above all in this MAPS protocol is the extreme degree of self-preoccupation displayed. . . .

The picture of himself that he gives us in these outpourings is one of a guilt-laden helpless victim of circumstances. Life has given me a raw deal, he cries. Help me. The four people in the Bridge story represent particularly the four aspects of himself that fill him with self-pity—the need to submit to authority (discipline), an underprivileged background (Negro), his physical inadequacy (crutches), and general despondency over his fate.

This self-portrait as a powerless prey of malevolent forces be-

yond his control keeps him first of all in passive-dependent inactivity. . . . Already we can see him as a highly masochistic character. . . .

With respect to women the withdrawal is motivated first by the incestuous wishes towards mother and sister, and second by his picture of them as cruel ogres—he is obsessed with the fear of the castrating female. . . .

With men there are obvious strong homosexual tendencies which frighten him. . . . He has either had some homosexual experiences or is very close to some. . . .

Both with men and women a deeper reason for the withdrawal lies in his profound masochism. . . . He is a man with a severely punitive super-ego, which cries out for punishment continually, hence he spoils every constructive endeavor sooner or later. In his relations with people this comes out most noticeably in his inability to tolerate kind and acceptant feelings on the part of the other person. . . .

Superficially he looks like a schizoid individual who withdraws from people because he is afraid of them but his formulation does not do the dynamics justice. Unlike the schizoid with rigid intellectual defenses, Jay is tremendously concerned with gaining the attention and approval of people. . . .

What is characteristic of Jay is a series of ephemeral attachments. Consciously he feels friendly enough toward them, yet inside he knows that there is an absence of genuine emotional contact. . . .

In his defensive structure, primary importance must be attached to a pattern of submission alternating with defiance. . . . Sooner or later the repressed hostility breaks through the surface veneer and the façade of submissiveness comes to an end. . . . The withdrawal into fantasy [is the second defense]. A third defense of great importance is a spectator attitude toward life, which includes much voyeuristic gratification. The story on the blank card . . . brings out this spectator attitude very clearly. . . .

Much information is available about Jay's life history; he tells it to us in the various stories. One must raise the question here as

to whether the picture he has of his life is not largely fictitious. This question can be answered in the negative. . . .

Putting all this together, we conclude that Jay always suffered from an overattachment to a strict mother who built herself into a martyr. . . . The father was always weak and distant. . . .

The most serious symptomatology in Jay . . . is the continued drifting. There are also clear-cut anxiety manifestations—self-consciousness, sweating, depression, and much fear. Often patients of this type develop vague psychosomatic symptoms—headaches, chest pains, but above all we can expect disturbances of the respiratory tract (colds, quite possibly hay fever or asthma) because of the constant rage and cry for help from the mother.

Under severe stress during the war many such patients developed transitory psychotic episodes which cleared up with remarkable rapidity once they were removed to a more secure situation. Jay may have been through such an episode, but he is not psychotic now. . . .

What kind of neurosis is this? He is full of free-floating anxiety and he is highly over-intellectualized. . . . But these are merely the surface symptoms. The core of his illness lies in the deep-seated masochistic attitude which spoils everything he does; hence we prefer to classify him—if classify him we must—as a masochistic character.

Interpretation: Rorschach Technique

The following are excerpts from Dr. Pauline Vorhaus' blind interpretation of Jay's Rorschach record [28].

The first impression on a superficial reading of his Rorschach record is one of brilliance. Whatever else may be wrong, it is clear that this subject has high intelligence and that, at least in some situations, he is able to use it brilliantly. In this same superficial first reading, it also seems clear that he is highly resourceful, with a readily available creative ability. Likewise, the fact of responsiveness to outside influences can immediately be noted. He appears sensitive to the moods and attitudes of others; both able to

empathize and to respond affectively. What, if anything, is wrong with him?

As we examine more closely, disturbance is disclosed in the very way in which those personality aspects just described manifest themselves. . . . Difficulty in maintaining good reality contact is evidenced. . . . This patient has marked variations in his ability to perform, and the range is from very superior functioning ability to gross inability to function. . . .

Has a one-time good relationship to his mother resulted in a withdrawal to a private world, where, to use his own words, he does not "miss" the things he would otherwise miss . . . ?

This brings us to a further consideration of the patient's sexual adjustment. Is he as heterosexually oriented as one might suppose . . . [or] might it be instead that the patient "over-protests" . . . ? A concealed homosexual reaction is suggested . . . [and] the sense of inadequacy associated with the usual phallic area. . . .

One might question the extent to which stability exists. . . . Suggesting an "on guard" feeling, as though part of him must stand alert in case the force of these ego-alien drives should increase beyond control. . . .

We may infer that the ability sensitively to feel the pulse of the situation is one which is not so much used as kept in reserve. . . . Sometimes, when this patient does attempt to size up a situation, he grossly misjudges its implications. . . . Can it be that an earlier ability to empathize has been replaced by a kind of flight reaction . . . ?

We cannot avoid feeling that, when he does see things in his own unique way, this way is characterized by its lack of reality contact; its inability to see things with at least that minimum of accuracy which would prevent one from using such terms as "queer" or "bizarre" to characterize his thinking. . . .

In summary, then, we have the Rorschach picture of a superior individual whose functioning varies in an unpredictable and erratic manner. Sexual disturbance is suggested, with homosexual drives appearing in a sublimated form. Flight of thought, tendency

to caginess, bizarre thinking, contamination, fixed ideas, over-concreteness, shallowness of affect, and personal reference are all present. So is loss of reality contact, in a framework of a seeming reality orientation. The diagnostic impression of "paranoid schizophrenia" therefore seems sustained.

Discussion of the Interpretations

At this point the reader will probably have formulated his own hypotheses as to the manner in which the four psychological tests relate to one another in this case. The following remarks are meant to focus attention on some of the salient features of each of the four interpretations.

The MMPI

In the case of the MMPI, the over-all emphasis of the report relates to the subject's *diagnosis* (with a secondary emphasis on his feminine interests). The areas covered by the MMPI report include the subject's identification, interests, "persona," sexual adjustment, direction of hostility, psychiatric symptoms, and diagnosis. The report is essentially descriptive and attempts to classify the subject in terms of psychiatric terminology. There is no attempt made to infer etiology or dynamic development; it is "cross-sectional" in relation to the subject's present status, rather than longitudinal or developmental. The report is not unlike a report that might have resulted from a diagnostic interview of this same subject.

The TAT

The TAT report has some interesting differences from and similarities to the MMPI report. In the TAT report the over-all emphasis relates to the subject's *defenses* (with secondary emphasis on his obsessional paralysis and passivity). The shift is to a more dynamic orientation to psychological mechanisms more than psychiatric status. In common with the MMPI report, however, the TAT report is concerned with the areas of identification, sexual adjustment, psychiatric symptoms, and diagnosis. In addition, though, it includes information in the areas of defenses, conflicts, empathy, thinking,

and historical reconstruction. If the MMPI report gives a picture of "what he looks like," the TAT report gives more clues as to his intrapsychic history and organization—specifically his conflicts, defenses, and identity.

The MAPS Test

As one might expect, the MAPS test report is more like the TAT report than like the MMPI report. The MAPS test report emphasizes the subject's *dynamic* and *interpersonal relations* (with a secondary emphasis on his masochistic character). The areas covered are similar to those covered in the TAT report, except that the psychological self portrait and relations to others are more emphasized as an outgrowth, perhaps, of the less structured situation in the MAPS test. The MAPS test and the TAT reports enhance and complement one another. They are not mutually exclusive; they are, rather, additive variations on the dynamic approach to personality, emphasizing defenses, identifications, self-images, and interpersonal relationships.

The Rorschach

The over-all emphasis in this particular Rorschach report is on the quality of *thought* and the nature of the *reality contact*. What is primary is the organization (and pathology) of thought and fantasy. The characteristics of and approach to perception and ideation are emphasized. A description is given of the basic perceptual and ideational "eye-glasses" through which the subject filters (and distorts) himself, his world, and his relationships to his fellows. Comparisons with the report from the personality questionnaire (MMPI) and with the reports from the thematic tests serve to demonstrate the interrelatedness of the tests and the manner in which they enhance and supplement one another in giving the clinician insights and understandings into the different "layers" and areas of the subject's personality and effectiveness.

Some Theoretical Considerations

It would appear reasonable that, in order scientifically to validate the *differences* between the Rorschach and other tests, one would first have to validate each test. That is, in order to see how one test differs from another, it is necessary first to see what each test *is*. Thus the problems involved in the scientific validation of the relationships among tests must be discussed in terms of the problems involved in establishing the "validity" of each test.

In spite of the fact that a discussion of the techniques for establishing the validity of a complex projective psychological test is beyond the scope of this chapter—the reader is referred to Chapter 14, by Ainsworth, in Volume I—it is appropriate to discuss some methodological suggestions, developments, and points of view in relation to validity.

Validity for What?

There is a growing understanding of the complexity of the meaning of validity. As MacFarlane and Tuddenham [13] have pointed out, there is no answer to such general questions as "Is the Rorschach valid?" Rather one must be more specific and ask, "Valid with respect to what?" This trend toward specific piecemeal validation is the single most important methodological insight in recent projective test science and merits further and refined exploration. Once the notion was understood that one could not simply validate the Rorschach (or TAT, and so on) but had to validate in terms of specific and more limited criteria, the whole problem immediately became more clear and more manageable.

Multidimensional Approach to Validity

As stated, the attempt to achieve over-all validation of a complex psychological instrument is a chimera. It appears more and more evident that bite-size validation in reference to specific dependent criteria is the more fruitful (albeit less megalomaniac) course. In

line with this feeling—and indeed as one of the clearest statements in this area—is the set of technical recommendations for psychological tests published by the 1952 APA Committee on Test Standards [1]. In this report they listed four different types of validity, as follows:

Validity is not an absolute characteristic of a test. There are several types of validity depending on the type of inference for which the test is to be used. . . . Four categories of validities have been distinguished:

Predictive validity [which] denotes correlation between the test and subsequent criterion measures.

Status validity [which] denotes correlation between the test and concurrent external criteria.

Content validity [which] refers to the case in which the specific type of behavior called for in the test is the goal of training or some similar activity.

And *congruent* validity [which] is established when the investigator demonstrates what psychological attribute a test measures by showing correspondence between the scores on a test, and other indications of the state or attribute. This type of validation is used for tests intended to measure a construct arising from some theory; the validation consists of evidence that the scores vary from person to person or occasion to occasion as the theory would imply. [1]

To the above, the 1953 Committee on Diagnostic Devices of the Division of Clinical and Abnormal Psychology [2], taking cognizance of some of the work by Soskin and others, added a fifth type of validity, *postdictive* validity. Postdictive validity denotes correlation between the test and past criterion measures. Postdiction may be the least useful type of procedure practically, but it may be the most useful theoretically in that it can involve relatively objective, verifiable, already-occurred facts or incidents as the anchor for validation efforts.

This approach using five different kinds of validity would seem to be in the right direction, except that it is felt that this particular schematization of types of validity can be improved upon. With this end in mind, the writer's own scheme or classification of types of validity is presented in the next section.

Tripartite Approach to Validity

It is proposed that validation efforts involve three *simultaneous* approaches, that is, one should always pose three separate questions concurrently. These three items are: Validity for *whom*? Validity for *what*? And, validity for *when*? They will be discussed below.

1. Validity for Whom?

This category is concerned with (a) the characteristics of the individuals used as subjects in the validation study (and under what conditions the work was done)—for example, was this projective test “validated” on midwestern graduate students under amytol or on Ubangi adolescents under duress—and (b) the characteristics of the judges used in the study (and under what conditions the work was done). Subjects and judges should be described in *considerable detail*.

2. Validity for What?

This category is concerned with the kind or type of criteria used in the validation study. This particular item is a rather complicated and technical one and could be the subject for much discussion. The treatment in this context will be a somewhat oversimplified one, in terms of two categories:

Factual validity, in which the dependent variables are more-or-less demonstrable facts. Examples of such “facts”—on which a group of “competent” lay observers could agree—are these: “He was an only child.” “He recently attempted suicide by slashing his throat.” “He appears to be depressed.”

Congruent validity, in which the dependent variables are deductions or inferences from a theoretical point of view. This, of course, is identical with the “congruent validity” defined by the APA Committee, above. This is the type of validity one must use to investigate such constructs or inferences as “introversive personality,” “latent homosexuality,” “unresolved Oedipus complex.”

3. *Validity for When?*

This category is concerned with the temporal referent of the validation effort. It has been said that the goal of science is prediction. This may be a limited point of view, because there is the possibility of correlation with the past and the present as well as with the future. Thus there are three sub-types of "Validity for When?" These are:

Predictive validity, in which the dependent facts or congruences are in the temporal *future*; for example, "He *will* become acutely psychotic."

Postdictive validity, in which the dependent variables are in the temporal *past*; for example, "He *was* an orphan."

Paridictive validity—a term invented for this outline—in which the dependent facts or congruences are in the (more-or-less) temporal *present*; for example, "He *is* schizophrenic."

Thus, the suggestion is made in this presentation on the tripartite approach to validation that subsequent efforts to investigate aspects of the validities of psychological tests list—at the beginning of the presentation—for *whom*, for *what*, and for *when* the validation effort was designed.

One example illustrating this proposed format for validation studies—using Blum's Blacky monograph [5, page 7]—is given below.

A Study of the Psychoanalytic Theory of Psychosexual Development

Gerald S. Blum

For Whom: Subjects: 119 male and 90 female Stanford University elementary psychology students.

Judges: The author and his associate. Thirteen dimensions were scored for one of three categories. There was from 100 per cent to 76 per cent agreement on the various dimensions—more than expected by chance.

For What: The study involved congruent validity only. The research is an investigation of psychoanalytic psychosexual analogies (of expected differences between the sexes) in terms of results on the Blacky test.

For When: Paridictive validity only. The data are in terms of present status as male or female and in terms of inferred present stage of psychosexual development.

"Academic psychologists have long been concerned with the issues raised by psychoanalytic theory. . . ."

It is appropriate to conclude this chapter with a quotation from MacFarlane and Tuddenham which emphasizes again the importance of specific, itemized, catalogued research: "Progress will be achieved . . . not by global attack but by working through the lesser validation problems that can be phrased in precise and testable terms." [13, page 45]

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A Re-evaluation of Projective Theory*

A definitive formulation of projective theory is about as easy as the definition of a circular staircase. Everybody knows what a circular staircase is, but nobody seems to be able to limit himself to a purely verbal definition of it. There are no kinesthetic aids for the stating of the so-called projective hypothesis or projective theory, and perhaps that is the reason why it has remained so flexible. It is apparently difficult to deal even with projective theory without confusing it with projective techniques or with experiences gained with one particular projective test; and while it is by constant interaction of theoretical formulations and clinical experience that we increase our understanding and knowledge of human personality, interaction should not mean loss of identity for either theory or clinical datum. Yet the flexibility and the relative lack of concern for clear-cut lines has been productive, and the perhaps premature insistence on making explicit what so far has been more or less implicit might block the spontaneous accumulation of clinical observation and experimental findings. To put it in projective language, too much structuring of the stimulus might serve only to elicit the psychologist's conventional, consciously controlled activities rather than his spontaneous, rich inner life. It should be stated at once that no such thing is planned in the forthcoming discussion. Rather, the attempt at

* This chapter is a revision of a paper presented at the meeting of the American Orthopsychiatric Association, March 1, 1955, Chicago.

taking stock, as it were, is prompted by a desire to expand or fill in the theory, to make explicit some assumptions so that clinical experience can be ordered in additional and new ways.

The word re-evaluation rather than evaluation in the title of this chapter was chosen to serve as a reminder that in recent years many psychologists have made many thoughtful and decisive contributions to the evaluation of many aspects of projective theory. Following Lawrence Frank's first formulation [5] there came Rapaport's profound interpretation of the projective hypothesis [13], Rosenzweig's article on the progress of projective techniques and the application of psychodynamics [14], and his important contribution concerning the levels of behavior in psychodiagnosis [15]. Abt's and Bellak's [2] introductory chapters treat the problems of projection, perception, and psychoanalytic theory with great thoroughness and sophistication, and their evaluation of the status of projective psychology seems as valid today as it was in 1950. In more recent years, to name only a few, there were Eriksen's [3] and Lazarus' [10] very promising explorations of the perceptual distortion and defense as an aspect of projective theory. Perhaps one of the most significant new theoretical approaches has come from Miller [12], Hutt [9] and their group of students at the University of Michigan, and others who have suggested that the participation of the psychologist in the projective situation be accounted for in the formulation of the projective theory. The 1954 Symposium on the Implications for Projective Methods in Personality Theory [17], combining a variety of theoretical viewpoints, represents a sophisticated effort at evaluating projective principles. Schafer [16] very effectively integrates some psychoanalytic principles with projective theory and technique. Furthermore, there is an overwhelming abundance of experimental and actuarial data, much of which either explicitly or implicitly deals with various aspects of projective theory.

The purpose of this re-evaluation, then, is not to review what others have said so very adequately, but rather to discuss two concepts that are basic, in fact axiomatic, in all formulations of the projective hypothesis. One is that of the "private world"; the other, that of the unstructuredness of the stimulus.

The "Private World"

The "private world," never specifically defined, appears to be the subjective or experiential side of the individual which, described and interpreted from the outside, becomes the "personality structure." A human being experiences bodily sensations, pleasant or painful; he feels emotions, clear or confused, intense, flat, conflicting, satisfying, disturbing, overwhelming; he relates these feelings to other human beings, real at some point in life, or phantasied; he feels urged—at times more and at other times less intensely—to perform certain acts; some of these urges cause uneasiness, or tension, others can be accepted and acted upon without any conflict. He registers events of many kinds in the world around him and adds them to the store of memories of other events which he had previously registered. He thinks in a variety of ways: He judges the risks and advantages of an event to himself, he solves a given problem, he plans for a solution of a hypothetical problem, which may or not become an actual one at some time. He thinks about something that is common to many things or something that is related to one thing only or to just a part of one thing. He remembers and he forgets. He thinks in ways that are not bound by the laws of time and space, in which there is room for more than one thing in the same space, in which before and after need not occur in this sequence, and in which mutually exclusive events can occur simultaneously. He thinks in this manner most nights of his life while he is asleep. He knows that kind of thinking as dreams.

All these experiences take place within the person. He alone is aware of them; he is free to communicate them to others or to keep them to himself. Is this then the "private world" that the projective theorist sets out to explore? Apparently not, or not quite; for if it were, there would be no need to postulate the projective hypothesis. This private world could surely be understood directly, provided the individual were willing to share it and provided methods for a direct and systematic exploration of the intensity and differentiated quality of body feelings, emotions, and thought processes could be devised.

In fact, the method is and was available, and with some modifications perhaps might have served very adequately. The method referred to is the free association technique of psychoanalysis. For the time being, only the method as such is under discussion, not the underlying theoretical assumptions or the therapeutic implications of the technique. By combining free and directed associations, it is certainly possible to obtain a continuous verbal record of a subject's introspective observation of his private world at any given time. If the projective theory arose, as it is often said, as a protest against the measurement of achievements and the comparison of individuals with one another with respect to their success or failure in performing isolated tasks, and if the emphasis was to be on understanding the human being in all his aspects, then surely some form of recorded introspection would have been the method of choice. Why wasn't it?

The answer to that question seems to come from two strangely unrelated orientations, inseparably combined in the projective theory. One is that of the scientific laboratory from which the projective methodology emerged, and which insisted that the private world be elicited in a standardized, repeatable, experimental situation which meets the requirements of objectivity and makes possible inter-individual comparisons and a meaningful communication of the data. The other orientation, in contrast, emerged from the chair behind the psychoanalytic couch. It insisted that the sensations and emotions and thoughts the person can report introspectively are not his real private world, or at least not all of his private world; that the private world of which he is aware is activated by another private world, as it were, which is so private that even he is not aware of it except in its conscious manifestations. This "real" inner world, then, cannot be communicated directly; it can be understood only by inference or interpretation. Yet it is precisely this inaccessible part of the person that provides the motivations for the accessible and communicable experiences. Therefore, in order to understand the "total human being" rather than just to know his IQ or his rate of speed at placing pegs in holes, he must be understood in terms of his unconscious private world, which can be approached only indirectly.

The projective hypothesis points the way to such indirect approaches. In its simplest formulation it states that every action or reaction, or every behavior manifestation of an individual, reveals his personality—that is, the specific way in which he, activated by his unconscious motivational pattern, structures his conscious life experiences. The conscious life experience then, including the manifest behavior, is but the screen onto which the unconscious but decisive motivations are projected. Because these are hidden from the person himself as much as from the psychological observer, no direct technique of inquiry and introspection could bring them out into the open. Yet it would seem that for the psychologist of the 1940's, newly liberated from psychophysics, the inaccessible, unconscious foundations of an individual's behavior became of paramount interest, at least if we judge from the theoretical formulations.

In line with the projective hypothesis, projective methods were designed to provide the screen for the projection of the unconscious patterns—"to ask," as Rapaport [13] put it, "indirect questions" which will get "indirect responses." The assumption here is always that the direct question or the spontaneous account of the person will not give us the needed information because the person does not have it himself. So far so good. However, the question that must be asked now is this: If the projective theory is correct, and if every act or every behavior manifestation reveals the underlying motivational pattern, then why not observe such behavior directly? Why control it by specific experimental conditions? Obviously, here the genes that originate in the laboratory become dominant. The psychologist, no matter how eager he is to explore the unconscious private world, must do it in a manner that makes the data of his exploration public—that is, recordable and recorded, as well as communicable.

Thus the projective hypothesis becomes formalized in the projective test. Now everybody should be happy; we now know what we are after and we have respectable scientific methods with which to catch the unsuspecting unconscious set of motivations, the real private world. Yet it appears that we are not really happy; for the indirect response to the indirect question is as obscure to the psychologist as it is to his subject. He has a nice set of communicable observations,

but what do they say about the subject? In themselves, very little or nothing. They become most meaningful when they are ordered and interpreted according to a systematic theory of personality. Having accepted the notion that he is after unconscious aspects of the personality, he might as well utilize the theory that originally led him down this particular primrose path and interpret his data in the light of psychoanalytic theory.

To quote Rapaport in the same context, he states in a rare mood of understatement: "Here certain dangers arise." [13, Vol. II, page 10] He names two essentially theoretical dangers related to proper differentiation between overt and latent trends in the test indications, and to proper utilization of applicable concepts of the psychoanalytic theory. The more practical danger lies in the fact that an adequate knowledge of psychoanalytic theory is not easy to come by for most psychologists, and that the partial use or indiscriminate application of arbitrarily selected portions of a complex set of assumptions renders much of the resulting interpretation useless for the purpose of understanding any human being.

Many psychologists are fully aware of this danger and have found other ways to utilize projective data. One of these is, of course, the classic sign approach of classification, which, far from attempting to understand the total personality of a given individual, merely identifies the pattern of his performance and designates the nosological category into which the pattern fits best. This is a perfectly legitimate procedure, of course, and does serve a practical purpose where it is desirable to assign a classic, psychiatric diagnosis to the behavior of a person. Yet, while it is often helpful to use projective tests for this purpose, again the normative principle of measuring inter-individual differences is involved here, rather than the projective principle. This does not mean that it is not possible or desirable to arrive at a psychiatric diagnosis, if that is what is needed, by application of a truly projective theory. The difference lies in the mode of interpreting the data. In one case a person is diagnosed on the Rorschach, for example, as an obsessive compulsive because of the large number of *Dd*'s, the ambi-equal experience balance, the high *F* + *c*'s, the verbalized preoccupation with symmetry—to mention just a few such

"signs." These are forms of behavior that have been recorded in a large number of individuals who were diagnosed by independent sources as obsessive compulsive, and it is quite possible for any Rorschach technician to make a diagnosis on this basis.

In the other case, the projective psychologist interprets the person's behavior to mean that he uses much of his intellectual activity to keep ideas separate and disconnected from one another, that he emphasizes the fact that everything seems to have two sides (possibly that the two sides oppose each other), that he spends much energy on preventing himself from action, but that at the same time he has strong impulses to act. He will probably say that the person is anxious to be right, to do the right thing, and that he will try not to leave any loose ends in anything he does. He, too, will very likely arrive at the conclusion that this picture of a person coincides rather well with that described in psychiatric literature as obsessive compulsive.

The difference consists largely in the fact that in one case it is the test behavior that is measured, whereas in the other case the person is described in terms of his feelings and his attempts to integrate them into a satisfactory pattern of behavior. However, this difference still does not involve the use of psychoanalytic theory as such, even though we owe much of our ability to describe individuals in these specific terms to the case histories in psychoanalytic literature. Nor does this way of looking at a person require any particular technique that is presumably meant to elicit unconscious motivations. Observing a person at work, in his social relationships, through his everyday productions such as letters to friends or instructions to his children, or his participation in any organized game would bring the same things to light (not to mention the fact that many non-projective situations or tests lend themselves exquisitely to observations of behavior manifestations which, if selected, described, or ordered according to certain theoretical assumptions, will yield both diagnostic categorizations and personality pictures).

Where, then, is the real difference? Or is there a difference? This takes us back to the original statement of the projective theory, which claims that it is concerned with more than inter-individual

differences and normative classification, that it is concerned with that part of the personality which motivates the individual's total behavior as it is manifested in his perceptions, his judgments, his memory, his thoughts, his motor activities, and his affects. It is, as is often said, concerned with "basic personality structure"; and, in order to understand that, presumably even the sensitive observation of test behavior or of a variety of life situations is not enough. The behavior must be specific—that is, behavior in which the unconscious sources tend to come to light—and the interpretation must be in terms of the knowledge of the unconscious.

What exactly do projective theorists mean by the term *unconscious*? Presumably, if the concept is considered useful at all, it is accepted in the Freudian sense. Now when Freud [8] spoke of the unconscious, he differentiated between temporary and what might be called essential unconsciousness of a mental act. The temporarily unconscious mental act is the one that cannot enter consciousness because it has undergone repression, and is kept unconscious often at great expense in energy. Freud also said that the differentiation between conscious and unconscious does not hold for instinctual impulses—"an instinct can never be an object of consciousness—only the idea that represented the instinct." [8, page 109] When we speak of a repressed unconscious instinctual impulse, we can only mean that the ideational presentation of the impulse is unconscious.

Feelings, on the other hand, are at first glance certainly conscious, yet in analytic language there is such a thing as unconscious love or unconscious anger or unconscious guilt feeling. The assumption here is that the affect that is felt consciously and is discharged may not be the one that originally arose and whose ideational presentation was repressed or transformed. The original affect, in that case, can be restored only when the work of the repression is undone. The unconscious, then, has two different kinds of content—instinctual impulses, which never can become conscious in themselves, and ideational representations of impulses and affects, which may eventually become conscious.

But the unconscious is different from the conscious also by the qualitative characteristics of its processes. While the processes of the

conscious are regulated by reality, the unconscious, on the other hand, is characterized by primary processes—that is, by timelessness, exemption from mutual contradiction, and the substitution of psychic reality for external reality. Now, if this is the concept of the unconscious on which the projective hypothesis of the “private world” is based, we should state that we are concerned not with essentially unconscious instincts and impulses but with their repressed ideational representatives, which can and do become accessible in spontaneous phantasies, dreams, and neurotic symptoms. Furthermore, we must ask and attempt to answer two questions: (1) Are we assuming that the same repressed ideas and feelings also become accessible by way of projective methods? (2) How does the experimentally elicited sample of representatives of unconscious ideas and feelings become integrated into a total picture of the live, whole, real human being whom we try so hard to understand? The first question leads to the discussion of projective methodology in general and more specifically to that of the “unstructured stimulus.” The second question has several ramifications, some of which will be touched upon later.

The Unstructured Stimulus

If we now consider the original formulation of the projective hypothesis, we can readily agree that each action of a human being reveals something about him; but by now we also know that it is not just anything that we want to find out about the person, but rather specifically the connection between his unconscious ideas and feelings on the one hand and his conscious day by day thoughts, feelings, and acts. The projective method is faced with the task of providing the data and the projective psychologist is faced with the problem of integrating them into a total human being.

The collection of the data is our immediate concern. Whatever it is that is revealed in each act that a human being performs, the interpreted meaning of the act will vary depending on the individual, on the act, on the observer, and on the situation. Obviously, any trained

student of human behavior has misgivings on this score, and it is due to precisely these misgivings that one of the major axioms of projective methodology was formulated—namely, the demand that the projective situation meet experimental standards. As a result, the ever-varying real life situation must be converted into a maximally unchanging one. Within this situation, the projective psychologist now attempts to tap the unconscious to reproduce to some degree the psychological climate of the waking phantasy, the dream, the neurotic symptom formation, the parapraxes, the chemically induced lifting of the repressions. His experimental equivalent is the unstructured stimulus. In contrast to the usual real life action in which the person reacts to a stimulus or to stimuli that he at least thinks and feels he perceives clearly, the stimulus in the projective situation is “unstructured.” The rationale for this is usually given as follows: The subject finds himself in a novel situation, he does not know what is expected; therefore he must structure the situation for himself, and in this process he reveals his mode of organizing experience, *i.e.*, his basic personality structure.

Now, if we are after his characteristic mode of organizing experience, why do we put him into a situation which, although eventually it might draw on his customary ways of dealing with situations, might also interfere with that very process due to the effects of novelty, surprise, and stress? Is it not the magical phantasy of the projective theorist that prompts him to overwhelm his subject and trick him into abandoning the very ways in which he customarily organizes his behavior? Is it not rather the hope that, over and above or underneath the desired sample of ego activity, the sudden unexpected appearance of the ambiguous stimulus will break down the vigilance of the ego and permit some of the unconscious ideas and feelings to emerge, not only as they influence manifest behavior, but in more or less pure culture?

The unstructuredness of the stimulus then serves the purpose of inducing the subject to reveal thoughts and feelings he would not reveal if his ego were not excluded or temporarily weakened so that it cannot perform one of its most important functions—precisely that of the keeping out of awareness certain ideas and feelings. The

unstructuredness of the stimulus in the projective test seems to be the attempted equivalent of the fundamental rule in psychoanalytic therapy.

In the fundamental rule of free association, the ego is, as Anna Freud says, "required to eliminate itself." [7, page 12] In the projective technique it is weakened by surprise and tricked into eliminating itself. In the psychoanalytic process the observation shifts back and forth between the "content of the id and the defensive measures of the ego," and this shifting observation is a matter of several hundred hours. Furthermore, there is a difference in motivation. While part of the patient's ego resists the compliance with the fundamental rule, another part at least attempts to go along with it, for two very powerful reasons. One is the patient's desire to get well, and the other is his relationship with the analyst. Can we assume that being faced with an accidental ink blot, even in a voluntary psychiatric diagnostic situation, carries the same incentive?

The answer to this is very likely a matter of quantity. In the observation, which extends over many hundred hours, eventually the structure of the total personality emerges, both the unconscious motivations and the changing adaptive methods of the ego. This is hardly the same "personality structure" that the psychologist attempts to catch in one or two test sessions. If it were, then the projective methods would have to be able to activate a very large sample of unconscious thoughts and feelings and an equally varied array of ego defenses against their emergence. They would also have to elicit a fair sample of conscious thoughts and feelings, in which the unconscious derivatives are still recognizable but are no longer excluded. The size of the sample seems important, if we are to have some assurance of becoming aware of a sufficient number of the ego's activities to be able to speak of personality structure or character. Otherwise, we will find ourselves very much in the bewildering predicament of the sorcerer's apprentice. If, under the influence of relatively early psychoanalytic theory and in protest against more or less sterile ways of looking at human beings, we dedicate ourselves to the exploration of the unconscious, we might end up with an equally sterile check list of ideational representations of instinctual impulses, which may

be basic—in fact, they are usually so basic that they do not differentiate anybody from anybody else—but which will not help us either to understand or to predict human behavior.

Perhaps even more important is the question of the representativeness of the responses we elicit in the projective situation. Specifically, do the responses of a person on a given day, in a given situation, represent him as he is? That is, do they represent his character as it has been formed over a long period of time, and has become relatively stable? Or do the responses represent a temporary pattern of dealing with stimuli or the stimulus situation? (The problem raised here concerns the relationship between the response to the projective test stimulus and the variability or consistency of that part of the personality which organizes the response.) Or does the projective stimulus always arouse the same affects and associations, and are these always handled in the same manner by the same person's ego? Actually, we do not know too much about this; there are far too few systematic studies of projective response variability and consistency. The current work of Fiske [4] and his associates suggests that on projective tests the personal, idiosyncratic responses vary from test to re-test while the popular responses remain constant. This seems to be a crucial question, not necessarily because of any great concern about the reliability of projective tests, but rather as it relates to viewing personality as a structure or as a process, as past-oriented or present-oriented, or as a mixture of both, perhaps as a structure in constant process.

Thomas French's [6] recently developed approach to dream interpretation points up several problems with which projective theorists must be concerned. Briefly, he states that all behavior, including phantasy activity, is goal-directed and problem-solving. It is the function of the dream to enable the ego to deal with the conflicts as they arise in the individual's life situation and to solve them in a manner that is satisfying to the ego at a given moment. He calls this current, present-tense conflict the "focal conflict" and suggests that it originates in a wish that is disturbing because of the expected consequences the fulfillment of the wish would bring about. This expectation of consequences, called the "reactive motive," pushes for

a solution that will resolve the conflict adequately. In the dream, this solution is seen in the manifest content. In order to understand the ego's integrative activity at any point in time, one must explore and understand the precipitating event or circumstances that give rise to the wish, and one must draw carefully on both the patient's associations to the dream and on general common sense to understand the distortions and discrepancies that reveal the reactive motive. While French suggests that one can deal only with the focal conflict in interpreting a given dream, he emphasizes that every focal conflict has its historical antecedents and that an individual's solution of each focal conflict is conditioned by his past experience. Yet the focal conflict shifts from day to day. What is focal today, precipitated by any one of a number of stimuli in an individual's life experience, may not be focal tomorrow. Thus, while all focal conflicts are related to each other and to the nuclear conflict of an individual, the integrative activities of the ego at any given point in time are aimed at solving the shifting focal conflicts.

These thoughts appear extremely productive for further exploration of the projective theory. Specifically, we might now ask this question concerning the stimulus in the projective situation: Does the test material of the TAT or the Rorschach, or the Wechsler-Bellevue, for that matter, or the Picture Frustration, stimulate the individual to organize his response to represent a solution of a current life problem, or of a chronic life problem? Can we make sure that we know the answer to that, or can we at least try to observe projective test responses in that light? Perhaps it would be productive to modify projective methods to include the gathering of information about the subject's experiences and concerns immediately preceding the test situation. It is quite possible that the influence of current preoccupations on his perception of the stimulus is one variable that has been neglected far too long in projective psychology.

One further aspect of the stimulus and the stimulus situation should be mentioned here. This point will be touched on only very briefly, because a great deal has been said about it by others. It is very likely that there is a considerable discrepancy between the in-

terpretation of the stimulus situation by the psychologist and the interpretation of the same situation by the subject. The psychologist, by and large, insists that the stimulus is essentially the test material, and that this is his guarantee for experimental purity. Subjects seem to take a much more global view of the whole business, and they insist on including the examiner as part of the stimulus leading to their problem-solving activities. What is referred to here is not, of course, the overt, verbal inclusion of the examiner, but the conscious and unconscious thoughts and affects aroused by the examiner in combination with those aroused by the even more unstructured aspects of the test.

Conclusions

These attempts at re-evaluating some of the principles of projective theory suggest several avenues of exploration for the future.

First, let us consider the proposition that the proper field of investigation of projective psychology is character, its formation and its manifestations, and that the theoretical emphasis, in so far as it is psychoanalytic, should be the psychology of the ego and not the psychology of the id.

Second, let us restate the projective hypothesis to include a somewhat clearer statement of what actions and reactions lend themselves to the projective exploration of personality. In this context, it would perhaps be timely to call a halt to the parlor game of making up projective techniques on the assumption that anything can be used as an index of an individual's personality. Let us state also that it is not the major function of a projective technique to trick an individual into abandoning his ego's repressive functions, but rather to provide carefully selected and varied opportunities to display the characteristic ways in which he performs a wide range of ego functions.

Finally, let us add that we do not know yet how sensitive our instruments are to the day by day changes of ego activities, as compared to their sensitivity to more permanent functions; nor do we know how the various instruments compare with one another in this re-

gard. Let us also state that we do not know too clearly what the boundaries are between the stimulus effect of the test material and the stimulus effect of the examiner, in the psychoanalytic sense of transference.

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Bibliography

PART ONE Alphabetical Bibliography to 1945

PART TWO Classified Bibliography, 1945 to 1955

Note on the Bibliographies

As mentioned in the Foreword, bibliographical entries are presented in two parts. Part One is a combination of the bibliographies published in *The Rorschach Technique* (1942) and its *1946 Supplement*, listing in alphabetical order publications up to 1945. To the 642 items included in the 1942 and 1946 listings, subsequent research has added 144 references.

Part Two, covering 1945–1955, includes 1899 entries. The basic material for this ten-year bibliography was assembled by a perusal of published books and monographs and the more than fifty periodicals that routinely publish Rorschach articles. The material thus collected was collated with available bibliographical resources. The greatest contribution of overlooked items came from the Rorschach bibliography by Nitsche and Parsons, covering the period up to January 1, 1954. We were able to add 74 items missing in our own collection from this source.*

A total of 35 items was contributed by an unpublished collection made by J. T. Barendregt in Holland, whose proximity to the European publications was particularly helpful.

Another notable bibliography is that contained in the most recent edition of Rorschach's *Psychodiagnostik* and available as a separate reprint.† This listing (1459 items) covers the same period as the Nitsche and Parsons bibliography. A bibliography with 1130 items is found in Allen, *Elements of Rorschach Interpretation*.‡ Extensive lists of publications on the Rorschach are found in the *Mental Measurements Yearbooks*.§

The Classified Bibliography in the present volume has been organized under six major headings. Each of the six major subdivisions is alphabetized and numbered individually. Since some publications obviously pertain to more than one of the six classifications, cross-references are provided.

* Carl J. Nitsche and Edward T. Parsons, *Index Bibliography on the Rorschach Technique* (Ann Arbor, Michigan: University Microfilms, Inc., 1955).

† Hermann Rorschach, *Psychodiagnostik: Bibliographie* (Bern and Stuttgart: Verlag Hans Huber; 1954).

‡ Robert M. Allen, *Elements of Rorschach Interpretation* (New York: International Universities Press, Inc.; 1954).

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PART ONE

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PART TWO

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III. Problems of Validity and Reliability

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IV. Genetic Psychology

IV, A. General

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See also V, A: 178.

*Cumulative Indexes,
Volumes I and II*

Index of Names

Index of Subject Matter

Note on the Indexes

These indexes attempt to give a complete coverage of the names and a thorough coverage of the topics found in Volumes I and II. The indexer made a fresh study of Volume I while preparing the Index of Subject Matter; the cumulative index now gives more extensive coverage of Volume I than is found in that volume's individual index. From both volumes, the indexer has tried to pick out all terms and topics that a user of the Rorschach technique might want to look up.

The cumulative Index of Names includes all persons listed in the text of both volumes, in the lists of references, and in the Bibliography. The Index of Subject Matter covers the text and chapter reference lists of both volumes but has not been extended to cover the Bibliography. In this connection, the bibliographical work of Nitsche and Parsons* deserves additional mention, since they supplemented their bibliography with a subject-matter index covering all the material found in the 2,184 publications listed in their bibliography. This index does not cover the 563 publications contained in our ten-year bibliography that are not listed by Nitsche and Parsons (our bibliography extends beyond the time limit of the Nitsche-Parsons work by 21 months). It seemed more feasible to limit our own cumulative subject-matter index to the material covered in Volume I and Volume II and to the published material referred to in the texts of these two volumes, without attempting to duplicate the efforts of Nitsche and Parsons.

In the cumulative indexes, a boldface **I** indicates Volume I; a **II**, Volume II. Page numbers in Roman type are text pages. Numbers in *italics* refer to the lists of References at the ends of chapters and (in the name index) to the Bibliography at the end of Volume II.

* *Index Bibliography on the Rorschach Technique* (University Microfilms, Inc., 1955).

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